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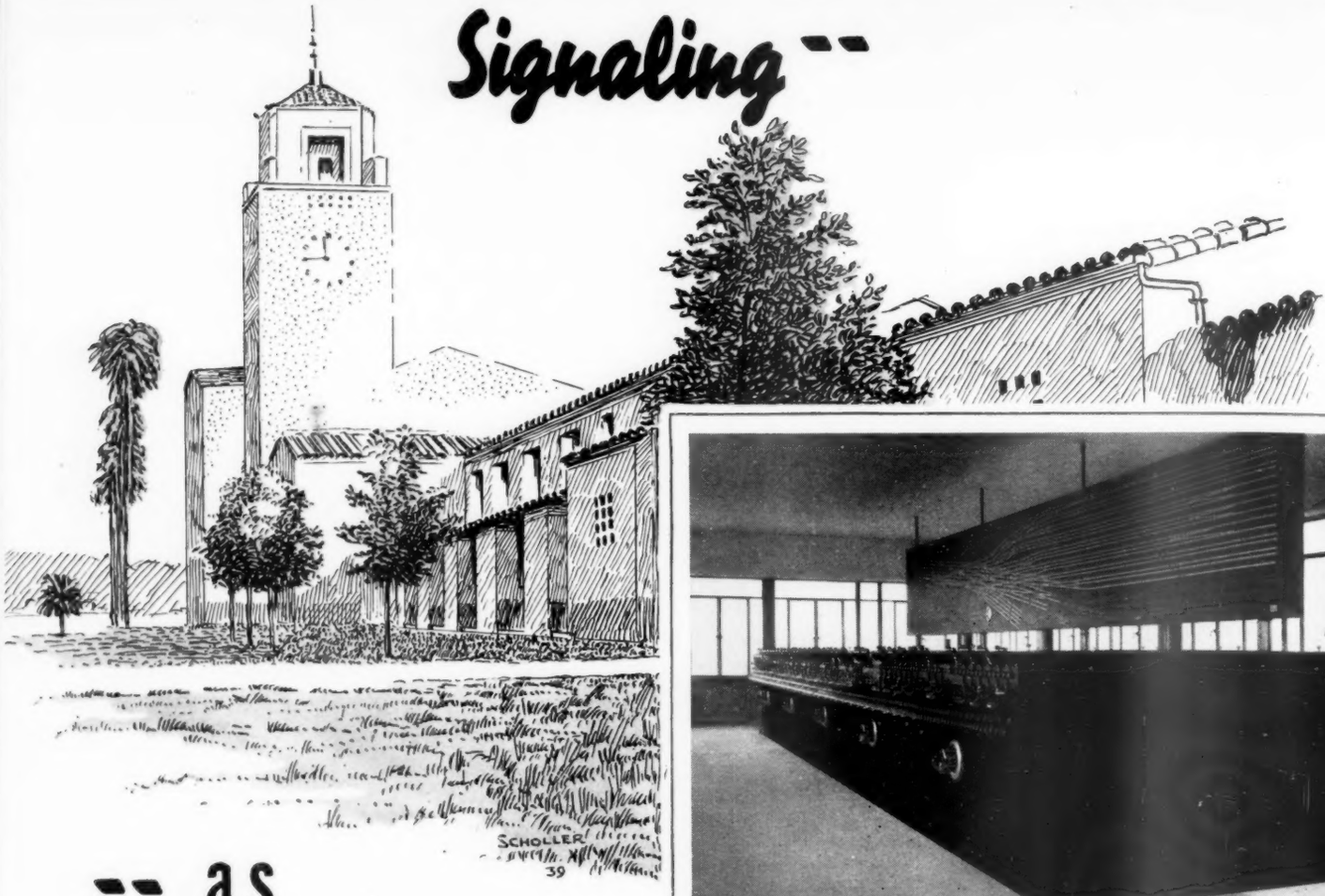

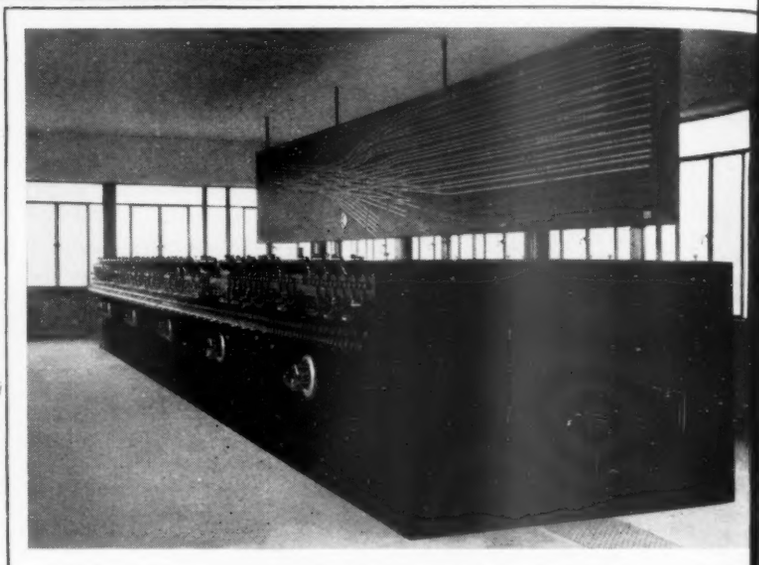

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RAILWAY AGE

Prospective Transport Legislation and Railway Net Earnings

What is the present railway situation? What is the present trend in railway affairs? The *Railway Age* is dependent for its business upon the railroad industry and the railway equipment and supply manufacturing industry—especially the latter, which depends on the railroads for its business. Consequently, this paper is disposed to take as optimistic a view as practicable of the immediate and long-range prospects of these industries. But this paper believes it unwise for those connected with or dependent on them to express any more optimistic views than the facts justify because it may encourage an unfounded belief that legislation dealing with the essentials of the railroad problem is unnecessary.

The real problem is that of largely increasing net operating income. Results of operation in the first quarter of 1939 are now available. Net operating income in the first quarter of 1938 was less than 20 million dollars; and in the first quarter of 1939 was 86 million dollars—a relatively large increase. But the important question is—how much does projection of the amount earned in the first quarter indicate what probably will be earned in the entire year 1939 and farther in the future? The total earned in 1938 was 373 million dollars—less than in any previous year of the depression excepting 1932. But results improved throughout the last two-thirds of 1938; and in the last quarter net operating income was earned at an *annual* rate of 2.33 per cent on investment, or about 606 million dollars.

Prospective Railway Net Earnings

Unfortunately, railroad traffic and earnings have suffered since the end of 1938 from the decline that has occurred in business generally. Consequently, in the first quarter of 1939 the net operating income earned was at an *annual* rate of only 1.78 per cent on investment. This would be for a year 463 million dollars—about the same as was earned in 1934, but less than in 1935, 1936 or 1937. Gross earnings were larger than in the first quarter of any year since 1931 excepting 1936 and 1937. But operating expenses also were larger than in the first quarter of any year since 1931 excepting 1936 and 1937; and taxes were larger than in the first quarter of any year since 1930 excepting 1937. In fact, taxes were slightly larger than net operating income. Senator Wheeler and some other statesmen in Washington claim the railroads' troubles are principally due to excessive fixed charges which they advocate ruthlessly "scaling down." How can statesmen of even the most modern socialistic vintage have the hardihood—or ignorance—to claim that fixed charges are the thing principally wrong with an industry when these same statesmen have made that industry's taxes larger than the net earnings from which its fixed charges and other return upon investment—if any—must be paid?

In spite of the new "recession" since the end of 1938, this paper believes the general trends of business and railway traffic and earnings are still upward, although this is obscured by threats of war and the coal strike. But they are not definitely and sufficiently upward to justify a belief that even an early renewal of their improvement at the same rate as in the second half of last year would afford a solution of the railroad problem. It can be solved only by a large increase of net earnings, which in 1938 were only 10.5 per cent of gross earnings and in the first quarter of 1939 were only 9.4 per cent of gross earnings; and the current increase cannot be accelerated enough without action that will either (1) enable the railways to get a larger share of the country's total traffic, or (2) enable them to reduce their operating expenses, or (3) provide them with subsidies comparable with those received by their competitors.

The Promises of Government and Labor

Last year the railroads sought to make a 15 per cent reduction in wages which would have reduced their operating expenses about 250 million dollars annually. This was prevented by President Roosevelt's public declaration against it and by the report of an "Emergency Board" created by him which supported his position. The President appointed the "Committee of Six," composed of three railway executives and three

labor leaders, to make a report and recommendations for solution of the railroad problem; and gave assurance that he would support its recommendations. The "Emergency Board" said in its report: "Whatever may be the disposition of this present (wage) proceeding, the existing willingness (of railway management and labor) to work together for what is fully realized to be a common end dare not be lost by strife over a question *essentially small in the light of the ultimate benefits that are bound to accrue from some better answer to the general railway problem.*" [Italics are ours.]

The Association of American Railroads previously had adopted a "Railroad Program" which included "immediate relief through decreases in labor costs." The "Committee of Six" subsequently made recommendations which included most of those in the "Railroad Program," and some others but omitted "decreases in labor costs." Its report was indorsed by the directors of the Association of American Railroads apparently on the assumption that, by co-operating, railway management and labor could get those "ultimate benefits" compared with which the "Emergency Board" had said a reduction of wages would be "essentially small."

Prospective Transportation Legislation

It cannot be too often emphasized that from the standpoint of railroad management, railroad investors and the public, the railroad problem is definitely and solely that of increasing net earnings. That is also the problem from the standpoint of most railroad men, employed and unemployed, although most of them and their leaders do not seem to know it. Any action, legislative or otherwise, that will contribute toward increase of net earnings will contribute toward solution of the problem. Any action that will not contribute toward increase of net earnings will not contribute toward its solution. How, then, about the prospect of legislation that will contribute toward the increase of net earnings and thereby toward those large "ultimate benefits that are bound to accrue from some better answer to the general railway problem?" Among the proposals in the original "Railroad Program" and their apparent prospects of adoption are the following:

Repeal of Land Grant Statutes.—This would increase both gross and net earnings 7 million to 10 million dollars a year; and it probably will be adopted.

Abolition of Federal Barge Line.—Apparently this will be done; and it will contribute something toward railroad "relief."

Repeal of Long and Short Haul Clause.—Instead of being repealed as to railways, the prohibition of charging of a lower rate for a longer than for a shorter haul "under substantially similar conditions and circumstances" probably will be applied to all carriers. This will do the railroads some good, but nowhere near as much good as would the clause's repeal.

Consolidations and Co-ordinations.—The railways probably will be given increased freedom of initiative regarding consolidations; but the new provisions apparently will include conditions requiring continued employment or payment of labor that is affected which will make it difficult or impracticable for years to secure economies that otherwise would result from consolidations.

Construction or Reconstruction of Bridges.—In connection with the improvement of navigable waters and the carrying out of flood control programs it often is necessary to build or rebuild railroad bridges and their approaches. There is prospect of legislation which will cause such rebuilding to be done in future at public expense.

Government Policies Affecting Transportation Competition

Regulation and Subsidies of Other Carriers.—The rates of both railways and motor carriers are now regulated by the Interstate Commerce Commission. It was proposed to subject carriers by water to similar regulation, and this probably will be done. It was also proposed to require those using inland waterways to pay tolls proportionate to the costs incurred by the tax-paying public in providing and maintaining them; but there is such strong opposition from the fanatics of water transportation that this proposal will not now be adopted.

"Railroads do not advocate a subsidy," said the original "Railroad Program," "but if the policy of granting subsidies to highway, waterway and air transport is to continue, no sound argument can be advanced against granting the same type of subsidy to the railroads." The "Committee of Six" proposed that the entire question of transportation subsidies should be investigated and dealt with by a new Transportation Board. There is no prospect now that this permanent Transportation Board will be created. Bill S.2009 contemplates investigation and report on subsidies by the Interstate Commerce Commission. The railroads are opposed to this because they believe it virtually means investigation and report by Commissioner Eastman who already is committed to views which cause the railways to regard him as a protagonist of commercial highway transportation. Probably the railways, supported by labor, will advocate creation of a temporary board solely to investigate and report upon subsidies and the proper place of each kind of carriers in transportation; and perhaps some such proposal will be adopted. But any resulting benefits to the railroads would be long delayed.

Rate-Making Rule and Labor Legislation

Revision of Rate-Making Rule.—"The experience of the past 15 months has shown the imperative necessity," the original "Railroad Program" said, "of so revising the rate-making rule (of the Interstate Commerce Act) as to permit the railroads greater latitude in pricing

their product. . . . The remedy for a situation which has brought the railroads to the brink of disaster is such a revision of Section 15a . . . as will direct the commission to consider the revenue needs of the railroads as a primary consideration, and to use as a rate base a figure which can be definitely ascertained." This proposal is opposed by the traffic managers of powerful business interests and seems unlikely to be adopted in any very helpful form.

Labor Legislation.—The original "Railroad Program" "recommended that Section 3 of the Railway Labor Act, creating the National Board of Adjustment, be amended." The purpose was to stop awards by referees which are becoming increasingly unreasonable and expensive to the railways and from which existing law permits no appeal by the railroads to the courts. The report of the "Committee of Six" having been endorsed by the directors of the Association of American Railroads, this part of the original "Railroad Program" has been at least temporarily abandoned.

The "Commodities Clause" of the Interstate Commerce Act prohibits the railroads from producing or dealing commercially in goods that they transport. The original provisions of bill S.2009 broadened it to apply to all carriers; but this broader provision has now been dropped from the bill.

The so-called "Lowenthal Bill" introduced in the Senate would create a special Railroad Reorganization Court to handle all reorganizations of bankrupt railroads and would require scaling down of capitalization and fixed charges upon the assumption that the net earnings of a railroad in future will be no larger than during the six years subsequent to its reorganization. This plainly is intended not to help increase net earnings, but to make increase of them apparently unnecessary.

How About the "Larger Benefits" Promised?

The foregoing survey plainly does not indicate probability of the railroad industry securing either soon or for some years the large benefits promised from "some better answer to the general railway problem" than a wage reduction. The "Committee of Six" said, "An average of a billion dollars a year can justifiably be expended in further modernizing and improving (railway) properties, including acquisition of new equipment. This would be in addition to normal expenditures for maintenance. The resulting gain in employment would extend beyond the railroads to all those engaged in producing and manufacturing railroad supplies and materials."

It might well have added that the resulting gain would extend to the entire public because of the contribution that would be made to general recovery. But all experience shows the railroads cannot make any such large increase in their capital expenditures without an increase also in their net earnings to approximately a billion dollars a year—or to twice as much as they are making now; and this paper cannot see how legislation of which there is actual prospect would in the near future contribute one-half or even one-fifth as much toward net earnings as a wage reduction of 15 per cent would have. Most of it contemplates only "ultimate benefits" of uncertain value; and there is an immediately acute and pressing problem toward solution of which it apparently would make only a small contribution.

The leadership of the railway industry bowed to the will, views and wishes of President Roosevelt, his Emergency Board and organized labor in the hope that they would prove sufficiently influential to get really helpful action. It is being supported by organized labor, which has more to gain by equalization of government treatment of all carriers than the railways themselves. But organized labor's influence with the administration and members of Congress apparently is proving less potent than that of antagonistic business interests. There must be more heroic and effective exertions if legislation by Congress at this session is to contribute immediately or ultimately to the larger benefits promised from "some better answer to the general railway problem" than a wage reduction.

Give the Patrons A Break!

Marked progress has been effected in the smoothness and comfort of the riding of passenger trains by improvements in truck design and in the couplers and draft gears which are being applied on the new high-speed de luxe trains. The reduction of weight in these trains has also, in itself, affected the smoothness of train handling favorably. The longest of the lightweight streamline trains built for high-speed service are the City of Los Angeles and the City of San Francisco, each of which is made up of fourteen revenue body units. These trains are partially articulated and weigh about 790 tons each. Such a train of conventional equipment would weigh 1,000 tons or more.

These lightweight, high-speed de luxe trains have been a valuable factor in attracting favorable public attention to the railways and their service, as well as for the immediate attraction of travelers to the trains themselves. In their appointments, as well as in every aspect of the service which they render, the effort has been made to anticipate the wishes of a discriminating traveling public and to deliver them satisfied at the end of the trip.

On many other railroads, and even on the same railroads where such de luxe trains, with all their refinements of design and appointments, are in operation, other main-line passenger trains are being made up with all the cars which can be handled behind a locomotive. The limitation during the winter is the ability to get steam back through the train line for train heating. With this limitation removed during the warm

months, more cars may be added. Such trains are running from 1,500 to 1,800 tons in weight and, with the conventional type of coupling, handle little better than freight trains. No doubt, the cars themselves are quite capable of withstanding any shocks they are likely to receive in such service, and it is also probable that the passengers on such trains will reach the end of their journeys without casualties. The irritation of being piled up against the headboard of a Pullman berth each time the train starts, or of having to drink one's coffee from the saucer, however, is making many bad friends for the railways.

No doubt, there are those who will take exception to the statement that rough handling is inherent in the movement of these long passenger trains. With motive power of ample tractive capacity and with the most skilled engineman at the throttle, it is true that such a train may be started without severe shocks. Such starts require extreme care and time to pick up the slack at a very slow rate of acceleration. It is also true, however, that the skill of the average engineman is far from being equal to that of the most skilled man and that, on a fast schedule with a heavy train, time for such starts is not at the disposal of the engineman. As a practical matter, therefore, annoying shocks are the rule rather than the exception in starting passenger trains of such length and tonnage.

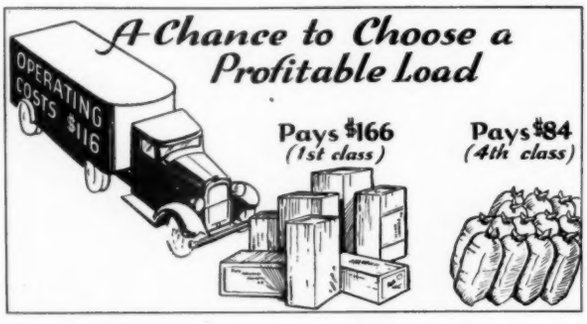
It will be many years before completely modern passenger cars will have replaced the major part of the present inventory. In the meantime, considerable numbers of existing cars are being rehabilitated, particularly so far as interior appointments and decorative treatment are concerned. Such cars are being turned out, in the interiors of which high standards of taste and comfort have been attained.

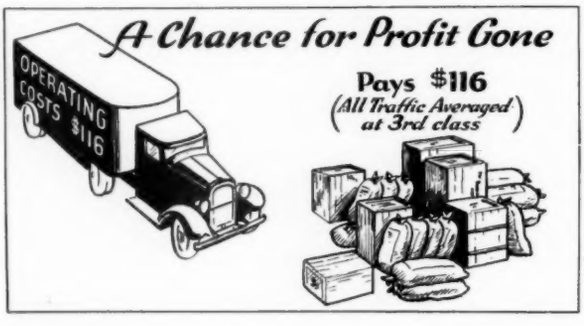
To advocate a reduction in the length of trains of conventional equipment to a point at which there is more than an even chance of smooth operation is to advocate a reduction in operating economy. Sight must not be lost of the fact, however, that the traveler no longer has to use the railroads; he has a choice of the highways, the airways, and the railways. Operating economy can no longer be maintained without regard to the taste and the wishes of the patrons.

Probably the practicable approach to this situation is the extension of the use of tight-lock couplers to all existing main-line equipment as fast as possible. With cars so equipped the comfort of the patrons will be assured and the length of the trains will be limited by the tractive capacity of the motive power.

What Will the Traffic Bear?—12

Let's take a truck operating between Cincinnati, Ohio, and Charleston, W. Va. Most likely it will haul a pay load of merchandise out of Cincinnati into Charleston. Probably it will return empty to Cincinnati—if it does not solicit some carload traffic away from the railroads at below-cost rates. If the solicitors are sufficiently alert, the truck will be loaded with first class traffic on its outbound trip, which will gross $166. If, however, it is unable to obtain a full load of first class, it may fill out 50 per cent with third class traffic—in which case it will gross $141. It will not touch fourth class except for return loads or fill-ins because fourth class will gross only $84 per truckload.





If railroad rates were based upon the third class weighted average, this truck could gross only $116. Such a rate would make a profit for the railroads on all the traffic they handle and it would eliminate $166 loads for the trucks to filch away. The truck's operating costs for the round trip would approximate $116, and there would be no profit in truck operation if available traffic paid no more than operating expenses.

The trucks, however, do not content themselves with taking advantage of the outmoded rail class rates to secure profitable outbound loads. Rather than return empty, they pick up anything there is to haul going back which will pay for labor, gas and oil. So, like as not, they pick up 15,000 lb. of glass at 18 cents per 100 lb. and gross $27 for the return trip. It probably costs $7 to pick up and deliver this glass, so they are $20 ahead of what they would have been had they returned empty.

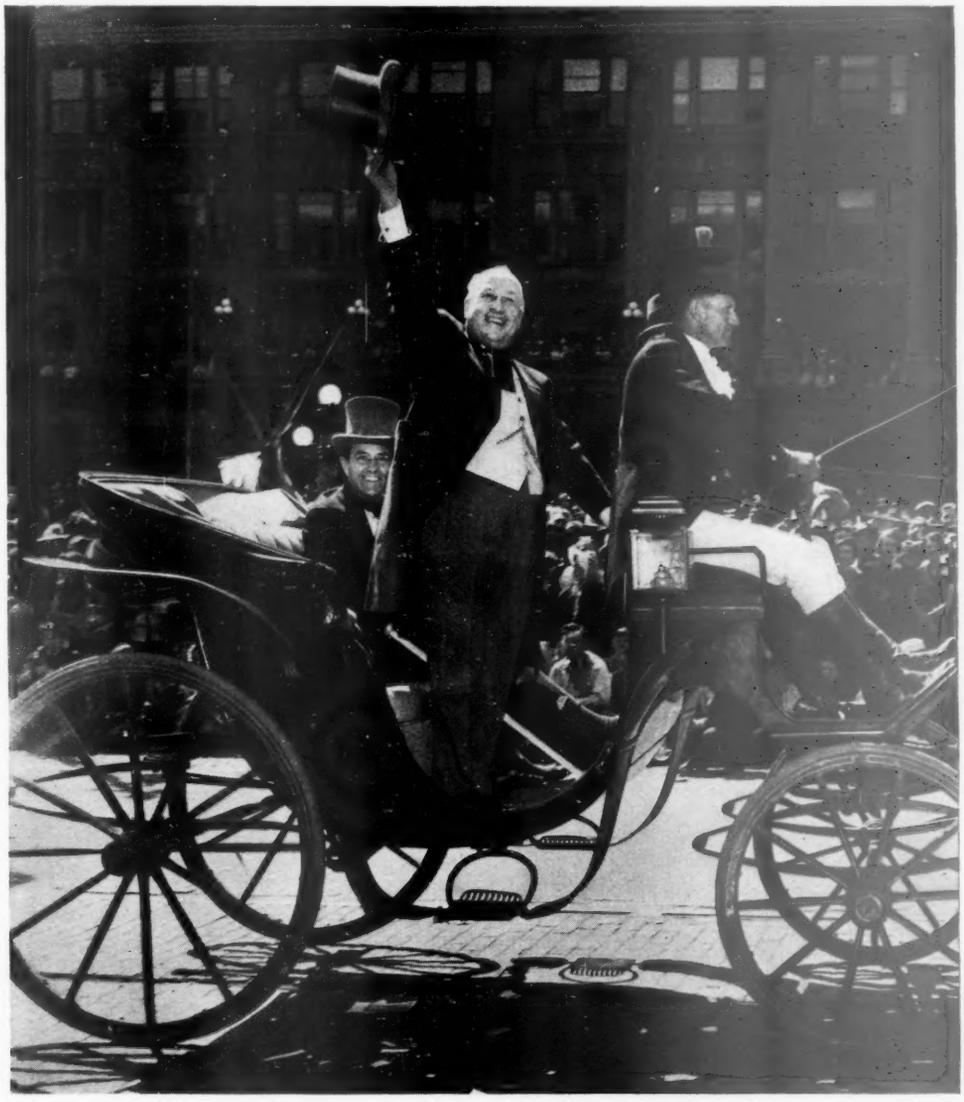
The railroads were receiving $48.50 for handling this amount of glass before the trucks cut the rate. But the trucks would never have cut in on this glass traffic at return-load rates, if the high class rates hadn't already given them outbound loads at fancy profits.

"Golden Spike Days" Honor Union Pacific

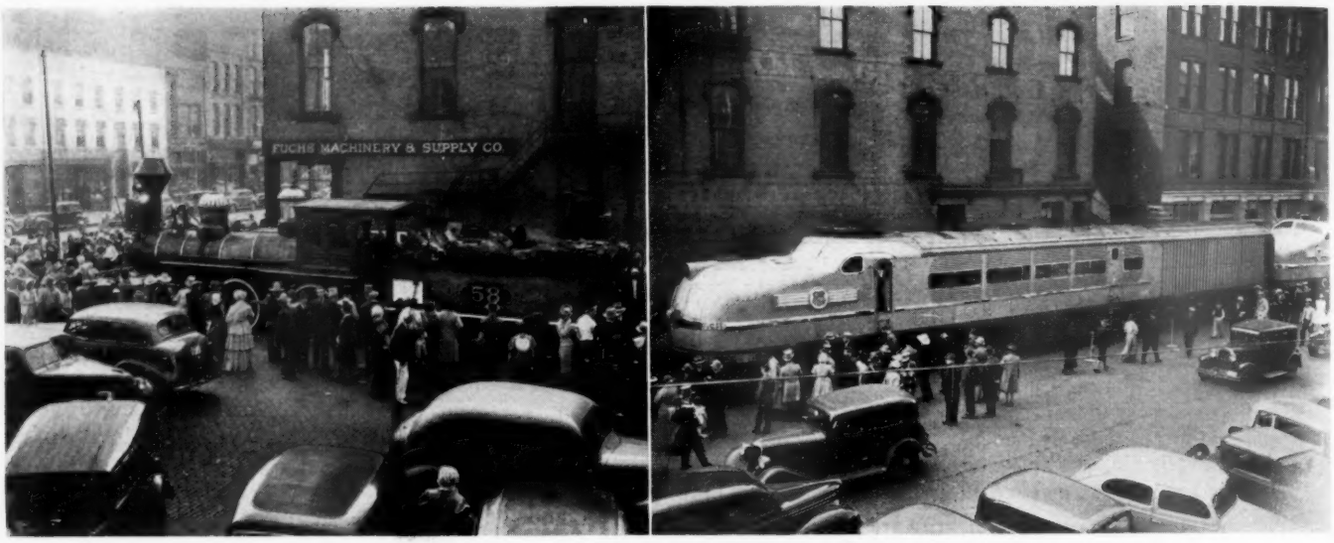
Parades, pageants and a movie premiere commemorate linking of Atlantic and Pacific by rail

THE entire city of Omaha, plus nearly two hundred thousand visitors from all parts of the country, joined in a colorful ceremony last week to honor the Union Pacific. The program of "Golden Spike Days," extending from Wednesday, April 26, through Saturday, April 29, included parades, pageants, an Indian encampment, huge banquets and the first meeting of the board of directors of the U. P. ever held outside of New York, but the most colorful and dramatic features were provided by the citizens of Omaha itself. More than 40,000 women and children wore the crinoline costumes of 70 years ago throughout the four days, while 50,000 men were dressed in swallow-tailed coats, fancy vests and beaver hats of the period, many of them having grown beards to carry out the illusion. In addition, more than a thousand buildings were converted, by means of false fronts, into accurate representations of what Omaha looked like on May 10, 1869, when the golden spike, linking the Atlantic with the Pacific by rail, was driven at Promontory, Utah, where the tracks of the Union Pacific and the Central Pacific met. No less an authority than Cecil B. DeMille, producer and director of the moving picture "Union Pacific," described the Omaha pageantry as outdoing anything he had ever seen.

The festivities started on Wednesday morning, when an historical exhibition was opened in the civic auditorium and an Indian encampment pitched on the courthouse lawn. The historical collection consisted of exhibits from all parts of the country, dealing with railroading and the West in general of 70 years ago, and



W. A. Harriman, Chairman and W. M. Jeffers, President, Union Pacific, in the Costumes of 70 Years Ago



The Old and the New in Locomotives Were Exhibited in Downtown Omaha

was augmented by the Union Pacific's own complete historical exhibit ordinarily housed in the railroad's general office building. The various building decorations were also unveiled, including those at the Union Station. The interior of the station was adorned with huge mural photographs, and the ticket sellers and other employees were dressed in old-time costumes. The exterior of the station, including the concourse and the plaza, was surrounded by logs to a height of ten feet to resemble an old-time stockade.

Special Trains Arrive

On Thursday morning, the special trains bearing the dignitaries from the East and West began to arrive. The first train was the Directors' Special, operated from Chicago by the Illinois Central. The U. P. directors arriving on this train were headed by W. A. Harriman, chairman of the board, and F. W. Charske, chairman of the executive committee. More than 50 railway executives and industrialists also arrived on this train to take part in the celebrations.

On Thursday afternoon, the old-time train used in the picture "Union Pacific" arrived from Los Angeles, carrying Cecil B. DeMille and several of the stars and other players appearing in the picture. On this train also were Heber J. Grant, president of the Mormon church and a director of the railroad, and Governors R. L. Cochran of Nebraska, H. H. Blood of Utah, and Nels Smith of Wyoming.

The engine of the old-time train is the "General McPherson," one of the original U. P. wood-burning locomotives of the exact type used at the ceremony of driving the golden spike in 1869. This was followed by the new turbine steam-electric locomotive built for the U. P. by the General Electric Company and delivered to the railway in March, 1939. Other cars in the train included a replica of the business car used by General Grenville M. Dodge, chief engineer of the U. P. during the construction period, a "blacksmith car" of the type used in the rail-laying trains, a baggage car and a coach of the 1869 period, as well as the necessary modern Pullmans and baggage cars to accommodate the passengers. An estimated half-million people viewed this train on its journey from Los Angeles to Omaha—at Salt Lake City a crowd of 50,000 people broke down the steel gates in the train shed to get a closer view of the train and its passengers—and, upon arrival at Omaha, the train was placed on exhibition on a team track in the wholesale district near the center of the city, where another quarter of a million people inspected it. This train was taken to Chicago on April 29, and will make a comprehensive tour of the country in the next few months.

The Reception and Banquet

W. M. Jeffers, president of the Union Pacific, served as master of ceremonies during the brief program of welcoming the movie stars and other dignitaries at the Union Station upon their arrival, and the party proceeded in old-fashioned carriages to the hotel, under guard of a troop of cowboys and a company of Union Pacific employees dressed in the uniform of U. S. cavalrymen of 1869. Over 200,000 people, more than half of them in costume, jammed the streets along the line of march to view this procession as it passed along under a veritable snowstorm of cardboard "golden spikes"

Parades, Costumes and an Indian Encampment on the Courthouse Lawn Added Color to the Celebration

hurled from windows in the upper stories of office buildings along the route.

Mr. Jeffers also served as master of ceremonies at the huge banquet given at the U. P. Junior Old-Timers' Association at the Ak-Sar-Ben Coliseum on April 27, where Mayor David Butler officially welcomed the guests to Omaha. This banquet was attended by more than 3,000 dinner guests, while 5,500 more spectators watched from the balconies. The seating of the throng was in charge of U. P. conductors and brakemen in uniform, and 500 volunteer waiters, all U. P. employees trained with amazing precision, accomplished the gigantic task of serving the 3,000 guests in exactly 18 minutes, without the least confusion. The catering was done by the U. P. dining car department.

The program following the banquet was entirely informal; nearly 20 of the visiting dignitaries made brief addresses, lauding the Union Pacific, and entertainment was provided by Union Pacific employees. Mr. Jeffers and Joel McCrea, leading man of the picture, who was detained in Hollywood and unable to be present in person, conducted a two-way telephone conversation which was broadcast to the crowd, following which Cecil B. DeMille, producer and director of "Union Pacific," described the steps taken to insure the realism and authenticity of the picture, and introduced many members of the cast of the picture, headed by Barbara Stanwyck, the heroine, together with other movie stars who made the trip. Both Thursday and Friday were also featured by luncheons and buffet suppers given in honor of the Hollywood visitors and the visiting railway men and industrialists.

Friday's Activities

At the directors' meeting on Friday morning, a resolution was adopted extending congratulations to Omaha and Council Bluffs on "this historic western spirit of enterprise they have evinced in planning, conceiving and bringing the Golden Spike days into successful re-enactment." Mr. Jeffers also announced that plans were well advanced for the construction of "the most modern ticket office in America," on the ground floor of the general office building at Omaha, which will have as one of its features a free parking lot for patrons' automobiles immediately adjacent to the ticket office. This ticket office is part of the general scheme of modernization of U. P. ticket offices begun some time ago. Mr. Jeffers also announced plans for making Golden Spike day an annual event in Omaha, and a committee of citizens was formed for this purpose. At a luncheon given by the Greater Omaha Association on Friday noon, each guest was presented with a golden spike.

1869. May 10th. 1869.
GREAT EVENT
Rail Road from the Atlantic to the Pacific
GRAND OPENING
OF THE
Union Pacific
RAIL ROAD.
PLATTE VALLEY ROUTE.
PASSENGER TRAINS LEAVE
OMAHA
ON THE ARRIVAL OF TRAINS FROM THE EAST
THROUGH TO SAN FRANCISCO
In less than Four Days, avoiding the Dangers of the Sea!
Travelers for Pleasure, Health or Business
LUXURIOUS CARS & EATING HOUSES
ON THE UNION PACIFIC RAIL ROAD.
PULLMAN'S PALACE SLEEPING CARS
GOLD, SILVER AND OTHER MINERS!
CONNECTIONS MADE AT
CHEYENNE for DENVER CENTRAL CITY & SANTA FE
THROUGH TICKETS FOR SALE AT ALL PRINCIPAL RAILROAD OFFICES!
Be Sure they Read via Platte Valley or Omaha
CHARLES E. NICHOLS, Ticket Agent.
O. P. GILMAN, JOHN P. HART, J. BUDD, W. SNYDER,

Old Poster Announcing the First Through Service to San Francisco

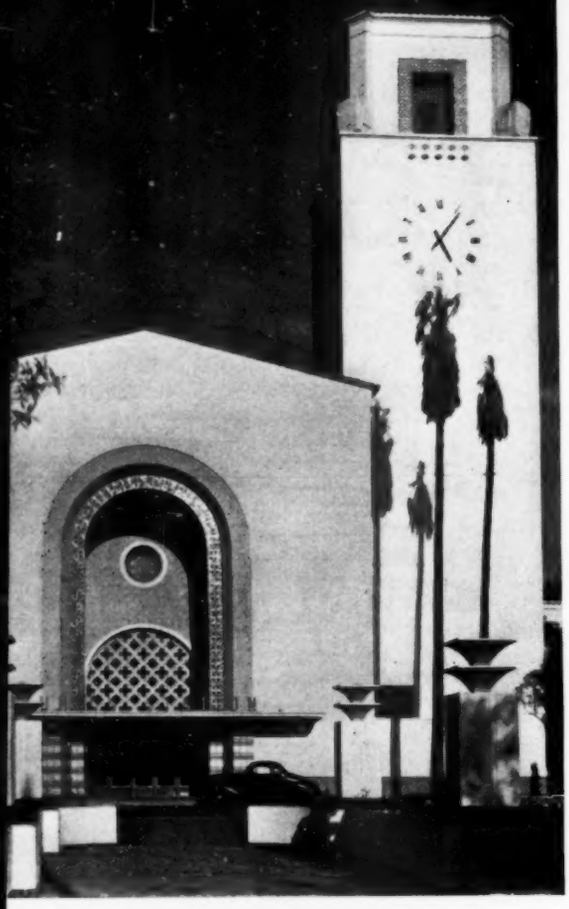
On Friday morning, a huge historical parade was held, featured by many floats depicting scenes of 70 years ago; a model, 95 ft. long, of a U. P. streamlined passenger train; a model showing various types of U. P. freight equipment, and a life-sized replica of the first passenger station in Omaha, erected by the Union Pacific in the early sixties. On Friday afternoon, a monument 56 ft. high, in the form of a golden spike, was dedicated before another big crowd at Council Bluffs, Iowa, the eastern terminus of the Union Pacific.

The celebration was closed on Saturday with more parades and contests for bands and drum corps. Saturday evening, a huge costume ball was held at the Ak-Sar-Ben Coliseum and a street carnival held in downtown Omaha. Music from the band playing at the costume ball was broadcast through the downtown streets, which had been roped off for dancing.

On Friday night, the premiere of the picture "Union Pacific" was held at three theaters, two of which were leased by the U. P. for its employees and guests. Mr. De Mille and his stars made personal appearances at

(*Continued on page 785*)

Reproduction of Photograph Taken when the Original Golden Spike Was Driven at Promontory, Utah, on May 10, 1869



The Main Entrance Presents a High Arched Opening, Bordered with Mosaic Tile

Open Union Passenger T at Los Angeles, C

\$11,000,000 facility of the Southern Pacific, the Sante Fe and the Union Pacific, including a spacious station in colorful Mediterranean architecture and an extensive signaled and interlocked track layout, ranks among the finest in the country

ON May 7, the Atchison, Topeka & Santa Fe, the Southern Pacific and the Union Pacific will place in service a new union passenger terminal at Los Angeles, Cal., that has been completed at a cost of more than \$11,000,000. The opening of this terminal marks the completion of a project that has long been agitated in this community of 1,300,000 population. It ranks as the finest on the Pacific Coast and among the finest in the country.

The new terminal, of the stub-end type, but with elevated tracks parallel with the main axis of the station, is located on a 45-acre tract of land facing Alameda street, near the civic center of the city, in an arrangement which gives all of the roads easy access, and which removes railway operation along and across a number of streets. The station proper, of Mediterranean architecture in white-faced concrete, with colorful tile roof areas and exterior ornamenation, consists of a number of building units of irregular shape, size and height, which, flanked by arcades and pavilions, have a main frontage of 860 ft.

A feature of the station is that it sets back approximately 200 ft. from the street line, providing a wide expanse for drives, walkways and auto parking space, which affords a striking vista of the station structure, uninterrupted except by tropical landscaping and scattered ornamental electric lighting fixtures, including 34 Westinghouse Reflectolux junior luminaries. Other features of the terminal are its effective arrangement of passenger facilities to provide maximum convenience with minimum interference between incoming and outgoing passengers; the colorful decorative effects and acoustical treatment which are carried throughout the building interiors; the adequate provisions made for the handling of a large volume of baggage, mail and express with maximum efficiency and minimum interference with passengers; the streamlined, butterfly-type platform sheds which are of unique design and appearance; and the effective track layout approaching and within the terminal area, fully signaled and interlocked to permit the most expeditious handling of the many train and switching movements which will be required at this point. All of these features are described in this article.

Site Has Many Advantages

The new terminal replaces the Santa Fe's station at Santa Fe avenue and First street, and the Southern Pacific's station at the intersection of Central avenue and Fifth street, the latter station having been used also by the Union Pacific. It is located on what is known as the Plaza site, the old Chinatown of the city, and, exclusive of the strip of land occupied by the approach tracks, covers an area approximately 1200 ft. long on each side between Aliso and Macy streets.

The use of the site for the new terminal required the razing of more than 50 one- and two-story buildings of various types, but it has the advantages of being close to the recently developed civic center of the city and in close proximity to the lines of the participating roads. Utilizing the Plaza site, however, required that the platform tracks be located parallel with the station frontage, a requirement which dictated that the plan adopted provide for a two-level arrangement, with the tracks at a sufficient elevation above the station floor to permit a passenger subway beneath them, with ramps leading to the platform level. The site in general required little grading, but the elevated track layout, which lies about 17 ft. above the general ground level, involved approximately 500,000 cu. yd. of filling and the construction of two long roadway underpasses of reinforced concrete, rigid-frame construction, beneath the throat to the station area. The most important of these structures, at Macy street, has a clear span of 68 ft. and is 505 ft.

Terminal

Cal.

The New Station Is of Mediterranean Architecture, in White-Faced Concrete, with Mission Tile Roofs and Colorful Decoration

long, carrying 25 tracks. The other underpass, at Vignes street, with a clear span of 68 ft., is 131 ft. long and carries seven tracks.

Striking Architectural Treatment

As already pointed out, the new station, reflecting the spirit and atmosphere of Southern California, is of Mediterranean architecture, with all that this implies in a rambling effect, with broken roof lines and colorful exterior and interior treatment. Set back across the spacious, landscaped approach plaza, the station presents a number of central building masses of irregular shapes and height, supported at each end by arcades and pavilions. All of the building units are white faced, with Mission tile roofs in variegated colors and irregular pattern. Adding to this pleasing treatment, all windows are provided with sectional steel sash painted Venetian blue, and all window and door reveals are accentuated with tan above red quarry tile sills.

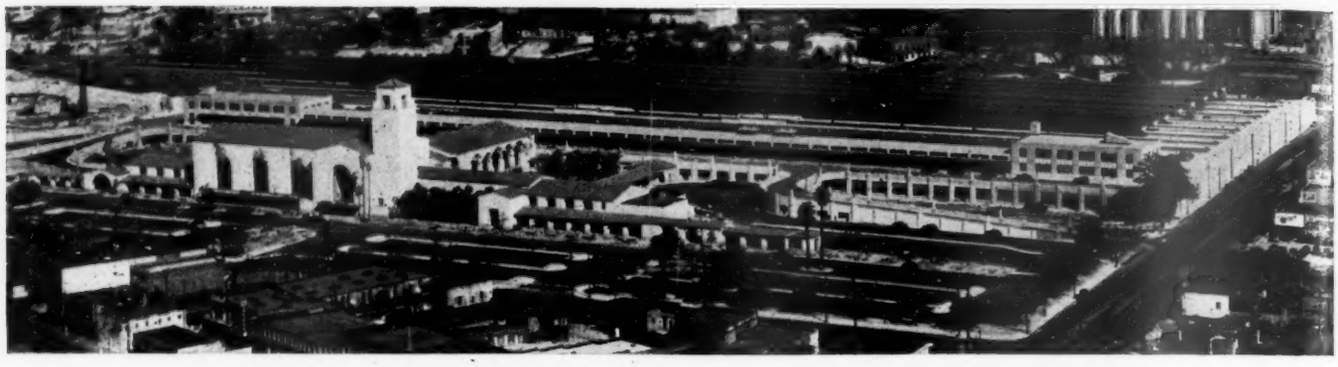
The dominating group of the front elevation includes a high, arched-face entrance vestibule, a ticket concourse or lobby, and a clock tower which rises to a height of 125 ft., surmounted by a Moorish finial. To the left of this main group is a low, two-story office unit, faced by a lower arcade, and beyond this lies an ornamental driveway arch and a continuation of the arcade, which terminates in a low peaked-roof pavilion, about 375 ft. north of the main station entrance.

Immediately to the right, or south, of the main building group is a multiple-arch-faced arcade, known as the South arcade, 83 ft. long and 38 ft. high, which forms an undercover passage or promenade 33 ft. wide, to an attractive restaurant unit of 65-ft. frontage. This latter unit, which is two-stories high and comparable in appearance with the two-story office unit immediately north of the ticket concourse, is, like that unit, flanked along its face by an arcade; the arcade, interrupted only by a roofed-over, two-lane driveway into the rear station grounds, continuing to a terminal pavilion immediately adjacent to Aliso street. Thus, the main facade of the station, with stepped-down roof lines and irregular setbacks and prominences each way from the center mass, extends continuously between Macy and Aliso streets.

On approaching the main entrance to the station, one is not only impressed favorably with the general appearance of the station as a whole, but becomes conscious of the pleasing detailed treatment employed to carry out the Mediterranean theme of architecture, which has been deviated from only as absolutely necessary from the standpoint of practical considerations. The main entrance presents an arched opening, 50 ft. high, bordered with mosaic tile in different shades of blue, gray-green and burnt sienna, which rises above a reinforced concrete cantilevered marquis, with the words "Union Station" across its projecting edge in bold, outlined letters. Recessed from the arch face are five glazed entrance doors in bronze frames and casements, and rising above the doors is an arched panel of ornamental concretework, glazed with pattern glass.

Passing through the main entrance, one enters a vestibule 50 ft. wide and 80 ft. deep, with a high, arched ceiling and an unobstructed floor area except for a central information booth. From here he can pass three ways through broad openings to the main passenger facilities—the ticket or main concourse, the waiting room and the restaurant. To the left lies the ticket concourse, the largest individual unit, 146 ft. long by 80 ft. wide, with the ridge line of its roof 62 ft. above the floor level. Here, except for a long ticket selling space along the east wall and a few clusters of grouped settees, the floor area is unobstructed, and leads at the extreme north end into a barber shop, rest rooms and toilet rooms, occupying the entire first floor of the two-story office unit.

The ticket sellers space in the ticket concourse occupies an area approximately 115 ft. long and 25 ft. deep, and has a semi-open face above Belgium black marble deal plates, with walnut wickets at each seller's space. The



Terminal Area, Showing the Track and Platform Facilities Directly Behind the Station Buildings

top of the ticket office is open, and the floor, of wood, is raised above the main concourse level on 2-in. by 8-in. joists. The purpose of this latter provision was to provide areas for electrical and ventilating ducts beneath the raised floor, while at the same time affording a warmer and more restful surface for the ticket clerks.

To the right of the entrance vestibule, a passage leads to the South arcade, referred to previously, which, in turn, provides direct access to the restaurant unit of the station. This arcade, which is 83 ft. long by 44 ft. wide, has a high, arched ceiling, multiple-arched faces, and a patterned red brick floor. The restaurant unit, presenting to the arcade a high, arched panel of sectional glass above glazed doors, has a floor area 62 ft. wide by 74 ft. deep for dining purposes, and a kitchen area 62 ft. by 64 ft.

Directly ahead of the main entrance vestibule, through a broad passage, the south side of which is flanked by parcel checking facilities and the north side by a news stand and soda fountain, lies the main waiting room. This room, the second largest passenger unit of the station, is 140 ft. long by 80 ft. wide, and its side walls, broken by wide square-top window panels, rise to a height of 36 ft. above the floor level. Here, the floor area is unobstructed except for group arrangements of leather-upholstered settees for waiting passengers.

Incoming and Outgoing Passengers Separated

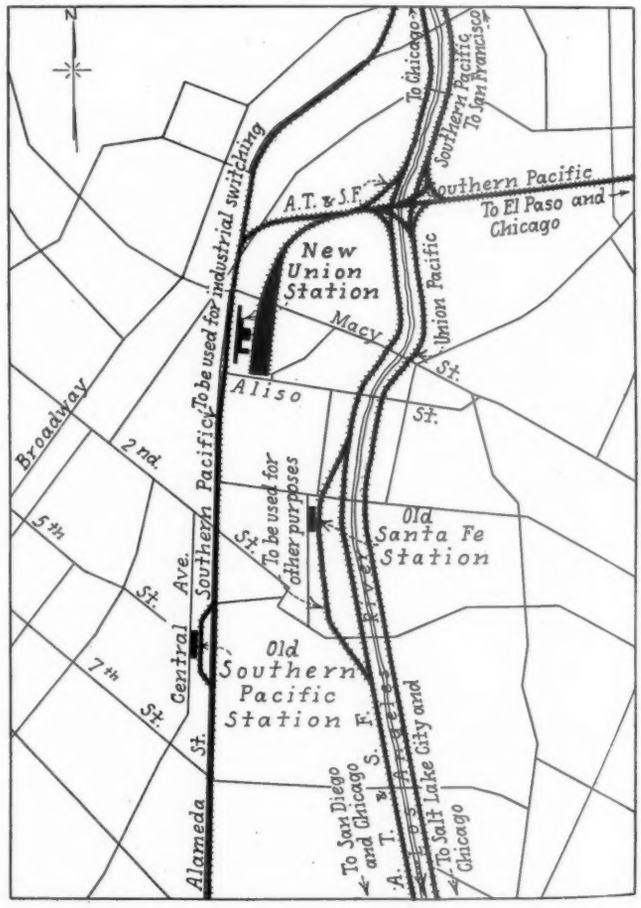
Beyond the east end of the waiting room is a train concourse and an incoming reception lobby, both of which, faced by a series of train gates, open into a departure and arrival lobby. From this latter area, an arched passenger subway, 28 ft. wide and 9½ ft. high at the crown, extends for a distance of approximately 500 ft. beneath all of the station tracks, serving each of the track platforms by ramps on grades of 12 per cent. The passenger subway, which was one of the first units of the terminal facilities to be constructed, to permit early filling operations for the elevated track layout, is a reinforced concrete, rigid-frame structure, comparable in design to the new Macy Street underpass.

In the train concourse—departure and arrival lobby arrangement adopted, departing and arriving passengers are completely separated, arriving passengers being directed through the separate reception lobby, which has no direct connection with the train concourse, the waiting room, or other main station areas. From the reception lobby, incoming passengers have egress either through an exit arcade, which leads directly to the taxi stand area at the south end of the station, or through what is called the South patio between the exit arcade and the waiting room unit, which leads directly to the front of the station through the South arcade.

The South patio, which is unique in passenger station construction, is an open area beautifully landscaped with full grown pepper, olive and palm trees, and paved in part with brick in five shades of red, bordered with small hedges and special plantings. Comparable with this patio, there is a North patio on the north side of the waiting room unit, a walled-in landscaped area, with access only from the waiting room. Here, within a central area paved with flagstones, which will be used as a dining space, one may dine amid colorful gardens spotted with orange, jacarandas, eucalypti, fig, avocado and oak trees.

Parcel and Baggage Checking

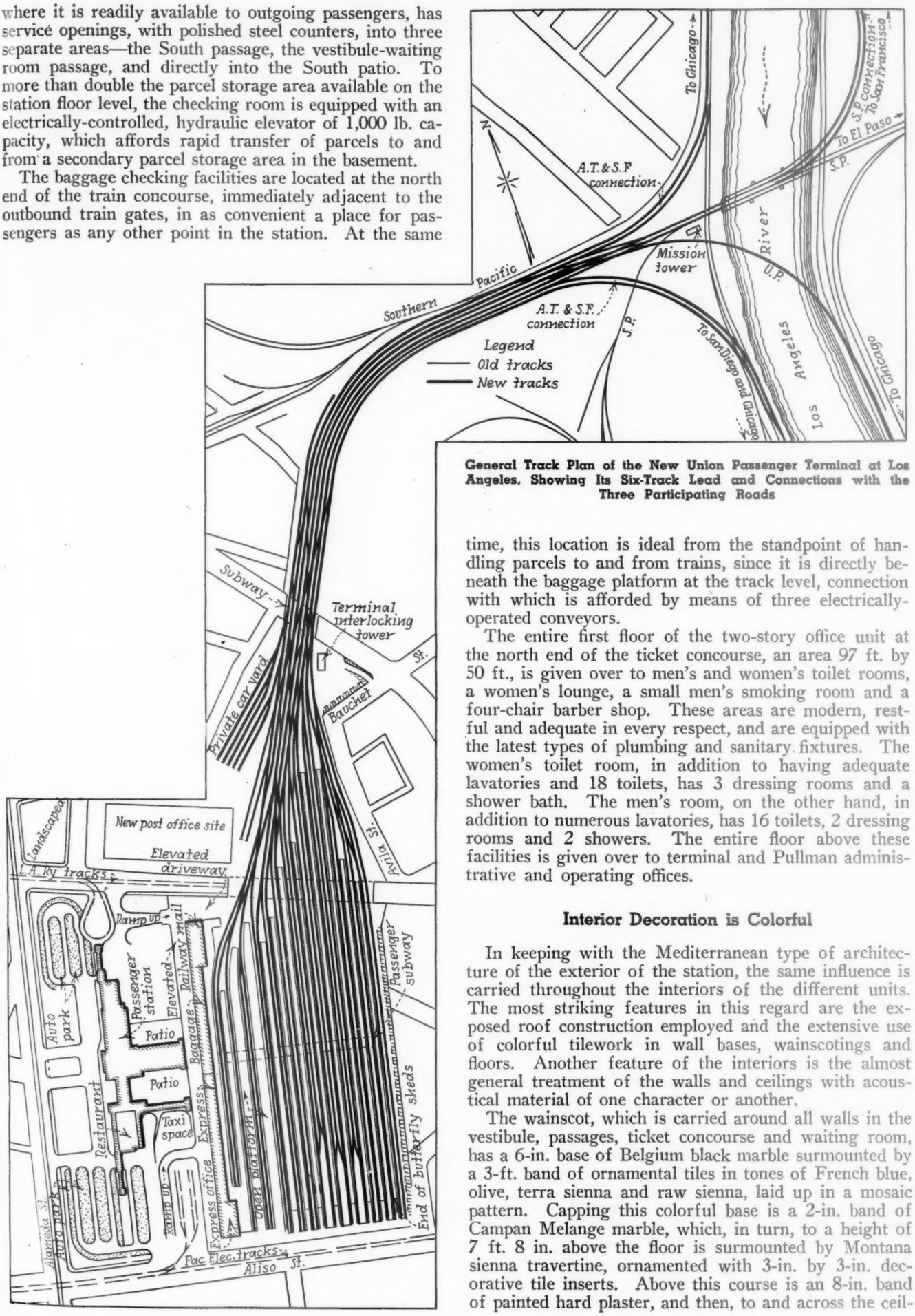
The parcel check room, located adjacent to the passageway between the entrance vestibule and the waiting room,



Sketch Map, Showing the Location of the New Union Passenger Terminal at Los Angeles with Relation to the Lines and Former Stations of the Participating Roads

where it is readily available to outgoing passengers, has service openings, with polished steel counters, into three separate areas—the South passage, the vestibule-waiting room passage, and directly into the South patio. To more than double the parcel storage area available on the station floor level, the checking room is equipped with an electrically-controlled, hydraulic elevator of 1,000 lb. capacity, which affords rapid transfer of parcels to and from a secondary parcel storage area in the basement.

The baggage checking facilities are located at the north end of the train concourse, immediately adjacent to the outbound train gates, in as convenient a place for passengers as any other point in the station. At the same time, this location is ideal from the standpoint of handling parcels to and from trains, since it is directly beneath the baggage platform at the track level, connection with which is afforded by means of three electrically-operated conveyors.



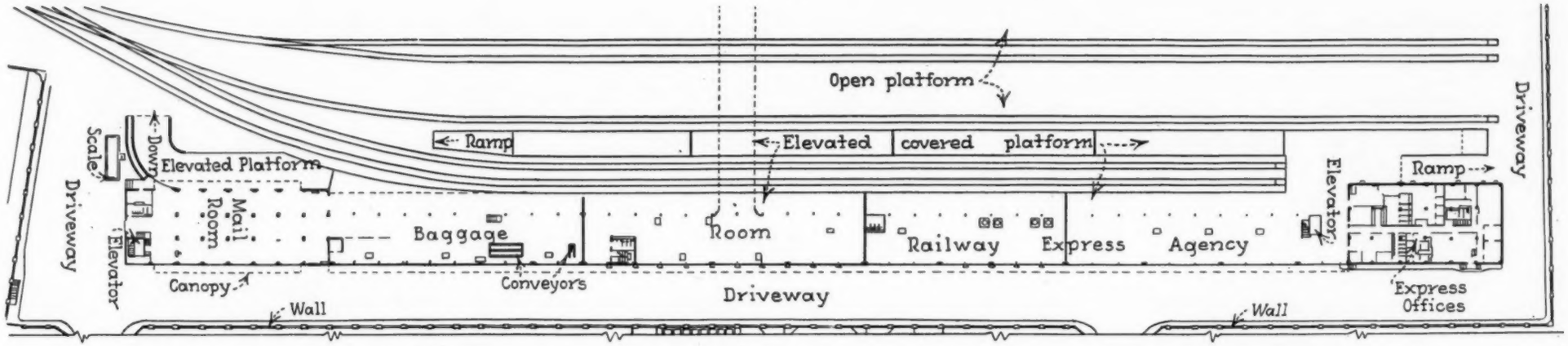
General Track Plan of the New Union Passenger Terminal at Los Angeles, Showing Its Six-Track Lead and Connections with the Three Participating Roads

The entire first floor of the two-story office unit at the north end of the ticket concourse, an area 97 ft. by 50 ft., is given over to men's and women's toilet rooms, a women's lounge, a small men's smoking room and a four-chair barber shop. These areas are modern, restful and adequate in every respect, and are equipped with the latest types of plumbing and sanitary fixtures. The women's toilet room, in addition to having adequate lavatories and 18 toilets, has 3 dressing rooms and a shower bath. The men's room, on the other hand, in addition to numerous lavatories, has 16 toilets, 2 dressing rooms and 2 showers. The entire floor above these facilities is given over to terminal and Pullman administrative and operating offices.

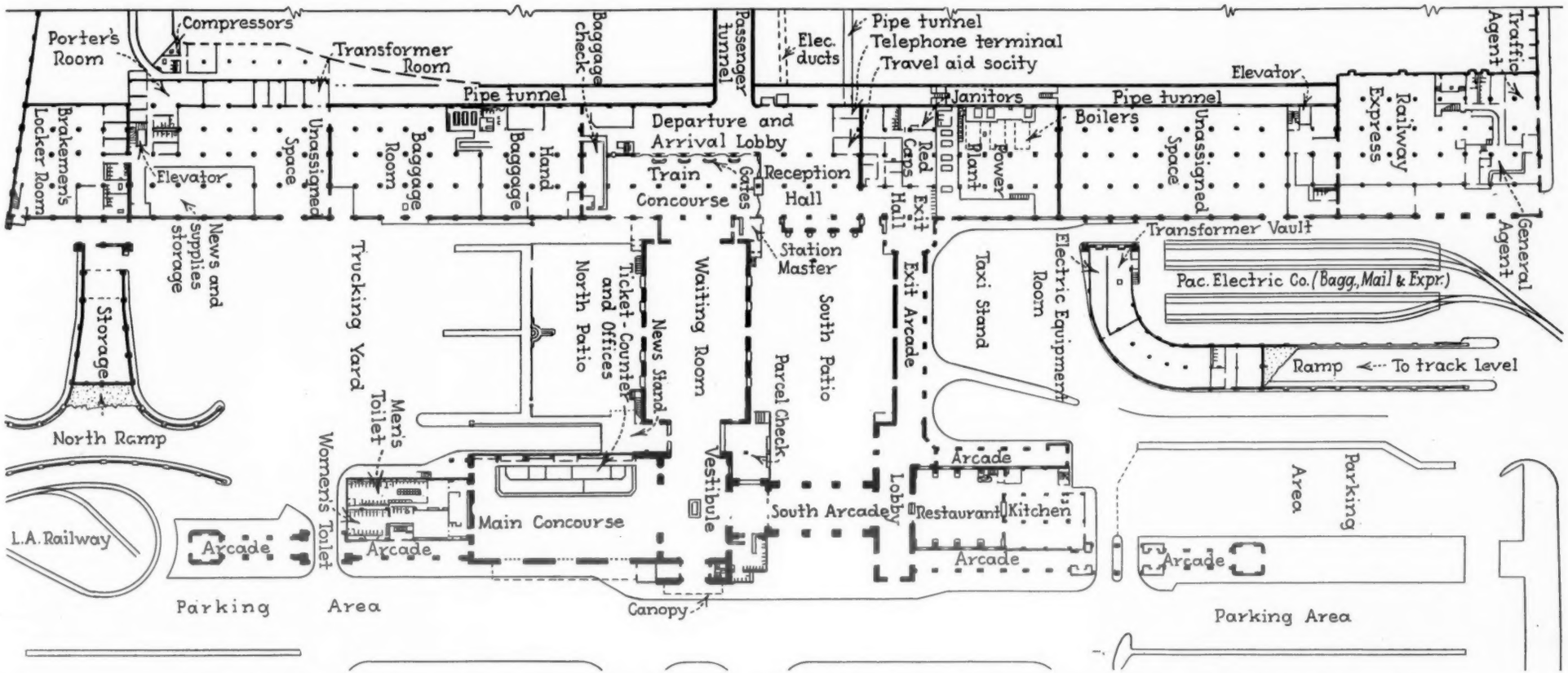
Interior Decoration is Colorful

In keeping with the Mediterranean type of architecture of the exterior of the station, the same influence is carried throughout the interiors of the different units. The most striking features in this regard are the exposed roof construction employed and the extensive use of colorful tilework in wall bases, wainscotings and floors. Another feature of the interiors is the almost general treatment of the walls and ceilings with acoustical material of one character or another.

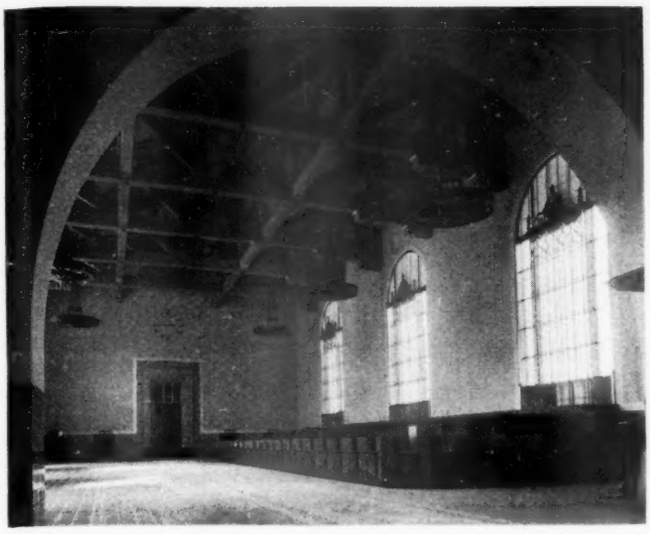
The wainscot, which is carried around all walls in the vestibule, passages, ticket concourse and waiting room, has a 6-in. base of Belgium black marble surmounted by a 3-ft. band of ornamental tiles in tones of French blue, olive, terra sienna and raw sienna, laid up in a mosaic pattern. Capping this colorful base is a 2-in. band of Campan Melange marble, which, in turn, to a height of 7 ft. 8 in. above the floor is surmounted by Montana sienna travertine, ornamented with 3-in. by 3-in. decorative tile inserts. Above this course is an 8-in. band of painted hard plaster, and then, to and across the ceil-



General Plan of the Utility Building, at the Track Level, Showing the Areas Assigned for the Handling of Baggage, Mail and Express



General Plan of the New Union Passenger Terminal, Exclusive of the Track and Platform Facilities, Showing the Assignment of Space in the Various Building Units



Looking Into the Spacious Ticket Lobby, Showing the Unusual Features of the Ticket Counters, Roof Construction, and Window Ornamentation

ing, the interior is faced with acoustical material given a tinted finish.

In the ticket concourse, entrance vestibule and South passage, the wall facings are of Calicel, while the ceilings are finished with Acousti-Celotex. In the waiting room, the walls are faced with Rocoustic and the ceiling with Transite acoustic tile, while in the telephone rooms and in the passageway between the entrance vestibule and the waiting room, the walls and ceilings are faced with Acoustone. This latter material is also employed in the ceilings of the women's lounge, the arrival and departure lobby, the reception hall, and all of the areas on the second floor of the office unit.

Colorful Floors and Ceilings

The floors throughout the station areas are equally as colorful as the walls, being surfaced for the most part with patterned quarry tile in two shades of red, ornamented by marble borders and runners in a variety of materials, designs and color tones. In the South passage there is an 18-in. border of Cardiff green marble, while around the vestibule, ticket concourse and waiting room, the border, 31 in. wide, is of Verdi antique and Diamond C Tennessee marble. The most striking feature of the floors is a marble carpet, or runner, 11 ft. wide, which extends continuously through the longitudinal centerline of the entrance vestibule and waiting room.

Other features which add to the appearance of the interior are the large, arched window bays or panels in all of the larger areas; the large Spanish grill-work designs which decorate the window bays in the ticket concourse and waiting room; and the deep spandrels of Bois-Jardin marble, with veins of red and white in a mottled gray background, which are used above all doors and below all windows in the larger public areas. In both the ticket concourse and the waiting room, all of the main window panels are fitted with amber cathedral glass to soften the light admitted, and, in addition, are equipped with Venetian blinds to shut out the brilliant afternoon sun when desired.

Smaller Areas Equally Colorful

The smaller public areas of the station, such as the train concourse, departure and arrival lobby, reception hall, toilet rooms, women's lounge and restaurant, are finished and decorated in complete harmony with the colorful effects employed in the larger public areas. In the train concourse, arrival and departure lobby and reception hall, the lower wall areas are faced with decorative tile in geometric patterns, and the floors are laid with Spanish tiles in various shades of tan, red, gray and black.

The restaurant departs in interior treatment from the Mediterranean style and is designed in the Eighteenth Century Spanish Provincial, modified, which is equally as colorful and yet makes for a more intimate feeling. This facility provides a main dining room which seats 27 at a U-shaped counter and 200 at tables and booths, and a mezzanine dining room, which affords additional table space for 60. East of the main dining room is a cocktail lounge worked out in a modern manner, with a bar, 17 private booths and 1 larger room designed especially for larger groups, accommodating in all 75. In addition, a soda fountain luncheonette will seat 30, and a separate lunch room provided for terminal employees will seat 80.

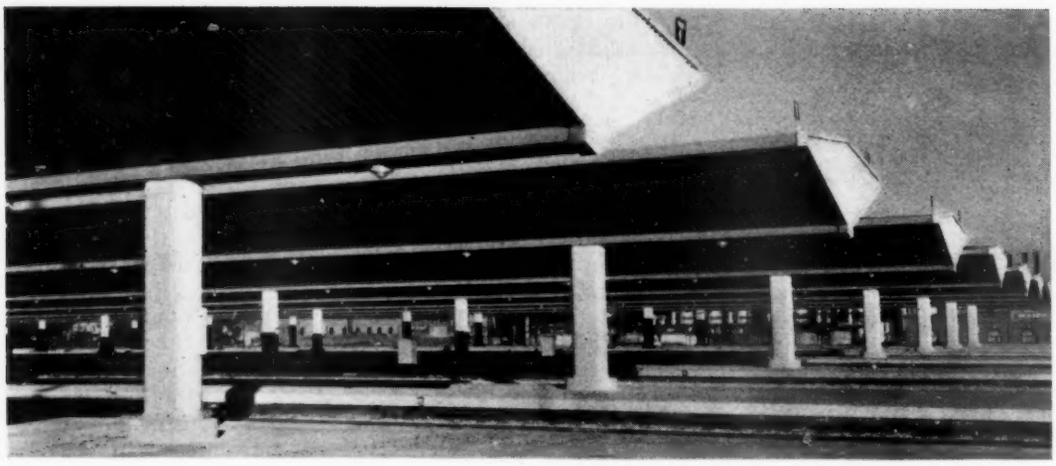
The main dining room floor is of patterned Valencia Spanish cement tile in red, black and buff. The walls have a wainscot of the same tile in buff with reeded surfaces, to a height of about 10 ft., above which are run moulds of plaster, with the balance faced with Acoustone panels separated by areas plastered with a textured stucco of cream color. The mezzanine dining room has walls paneled with white pine in random widths; the floor is carpeted throughout; and the ceiling is vaulted and has an Acoustone facing. In the cocktail lounge, the ceilings are also covered with Acoustone, but the floors are of paving bricks laid in herringbone pattern.

Heating and Lighting

Winter heating of the station buildings, as well as the steam supply for car heating, is provided by means of three 325-hp. Babcock and Wilcox, four-drum water-tube boilers, located in the basement and ground floor area of the utility building. All heating of the main public areas is by the indirect method, employing concealed Vento cast iron heating units, large blower fans, and a system of air ducts and inlet and outlet grilles. Except in the toilet rooms, fresh warmed air is forced through diffuser grilles in or near the ceilings, and the

Looking Into the Waiting Room Toward the Train Concourse at the Rear—Note the Ornamental Lighting Fixtures and the Arrangement of the Leather-Upholstered Seats

General Plan of the New Union Passenger Terminal, Exclusive of the Track and Platform Facilities



A General View Through the Track and Platform Area, Showing the Streamlined Butterfly-Type Sheds, with All Structural Steelwork Obscured from View

cooled air is drawn off through outlets near the floor. Throughout the system, copper-bearing steel ducts were employed, all air is filtered, and the amount of heat supplied, and thus the temperature of the different areas, is thermostatically controlled.

Night illumination within and about the station is in keeping with the general type of architecture employed, calling for ornamental chandeliers or lighting standards, but effective use has also been made of panel, or strip lighting at a number of points, principally above the main entranceways and in the reception lobby and train concourse. Altogether, approximately 500 lin. ft. of this type of lighting is employed, consisting essentially of uniformly lighted bands of opalescent glass, usually about 24 in. wide, projecting approximately 5 in. below the ceiling.

In the high-ceiling entrance vestibule, ticket concourse and waiting room, Spanish-type ornamental lighting fixtures, 10 ft. in diameter, are suspended from the roof, there being six such fixtures in each of the two larger areas and two in the entrance vestibule. Exterior lighting about the station and through the approach plaza is provided for by approximately 50 lighting pedestals, or standards, in addition to about 20 bracket fixtures hung from the building faces.

A unique feature of the station is that the entire basement beneath the vestibule, ticket concourse and waiting room, involving approximately 27,000 sq. ft. of floor area, is designed for and given over to a garage and an auto parking space. This area, which will accommodate 125 cars, has a concrete floor, wide spacing of first-floor-supporting columns, and is equipped with a fan exhaust system to keep the air free from injurious gases.

It is reached by a two-way concrete ramp located directly alongside the rear of the ticket concourse, which has direct paved connection with Mack and Alameda streets.

Highly Flexible Track Arrangement

The track layout at the terminal, which, as already mentioned, is on a fill at an elevation of about 17 ft. above the station floor level, involves eight passenger platforms served on both sides by tracks. These tracks are spaced 13 ft. center to center between platforms and 31 ft. center to center across platforms, except for three pairs of platform tracks which are spaced 26 ft. center to center to make room for engine release tracks between them. These intermediate tracks are located between those platform tracks which have been assigned to incoming trains, and are equipped at their ends with split-angle, double-turnout connections to the platform tracks. Through this arrangement, the locomotives of incoming trains can be cut off and sent to their respective enginehouses without delay. This entire layout of passenger platforms and tracks lies east of the baggage, mail and express facilities, which are served by six tracks for the loading and unloading of head-end cars.

The embankment supporting the track layout, which is retained on three sides by walls, was built largely from spoil taken from building excavations in and about the city. To insure its compactness, the material was placed in layers six to eight inches thick and was so thoroughly solidified with sheep's foot rollers that it occupies approximately 20 per cent less volume in the fill than it did in the excavation.

Unusual Platform Sheds

The platforms, which are of the low type, are 21 ft. wide and range in length from a minimum of 1,000 ft. near the sides of the layout to a maximum of 1,550 ft. near the center where long through trains will be handled. They are all of concrete construction, with suitable expansion joints at intervals, and have a hard, smooth wearing surface, sloped slightly each way from the center for drainage.

Throughout their length, the platforms are covered by butterfly-type sheds, the unique features of which are their streamlined effect, in which all structural steelwork is obscured from view, and the long spans of 80 ft. between columns, offering minimum obstruction to the platform area. To produce the streamlined effect, all of the structural steelwork of the roof deck, including the continuous trusses between columns and the cross frames, is exposed on top and is completely enclosed beneath with Robertson galvanized steel decking, the ribs of which add further to the modernistic lines produced. Adding further in this regard, all columns are enclosed in fluted sheet metal casings, surmounting concrete pedestals at the base. The column casings are painted dark gray, while the roof is painted light gray, with a darker gray trim. The decks are self-draining through the ribs of the decking to valley gutters provided at the center-lines of the sheds, and the gutters are pitched each way to downspouts at the column locations, which are enclosed within the column casings.

The underside shed deck arrangement also obscures all of the electric wiring conduit leading to shallow-set lighting fixtures along the center ridges of the sheds. These fixtures, of which there are a total of 514 throughout the platform area, are spaced approximately 20 ft. apart between columns, and are fitted with special light-diffusing lenses.

The three roads using the new terminal are given access to it from the north over a six-track lead extending from points of connection with their respective lines along the banks of the Los Angeles river, approximately one quarter mile north and east of the station. This lead, through a carefully designed arrangement of turnouts, crossovers and double-slip switches, connects with the station tracks in such manner that trains of any of the roads can be routed from any track in the lead to any station track, and vice versa. The terminal lead also serves a five-track private car yard with capacity of 19 cars lying on the north side immediately at the throat to the station platform tracks.

In the lead, the special trackwork includes 62 turnouts, most of which are equipped with solid manganese, self-guarded frogs and Samson switch points; 26 double-slip switches, largely with solid manganese, self-guarded frogs and Samson points; and three solid manganese crossings and one movable-point crossing. In addition, the special trackwork at the terminal includes three split wye switches at the ends of the engine release tracks between the through-train passenger platform tracks. These latter switches are equipped with Pettibone Mulliken oil-buffer-type spring switch mechanisms, so that when making moves to the engine release tracks, no switch-stand operation is necessary at the center tracks.

With only one or two minor exceptions, all of the rail and special trackwork throughout the lead and throat is of new 112-lb. section, and all of the tracks employ 100 per cent joint bars, Hipower spring washers, new treated ties equipped with Lundie tie plates, Modified Fair rail anti-creepers (from 6 to 16 per panel as necessary) and are supported on a heavy section of stone ballast. Furthermore, all of the treated ties of the curved track leads are equipped with Southern Pacific standard curve gage plates. Practically all of the special trackwork was furnished by the Pettibone Mulliken Corporation, and the Ramapo Ajax Division, American Brake Shoe & Foundry Company (formerly Racor Pacific Frog & Switch Company).

Insuring the stability of the tracks still further, both throughout the throat and within the platform area, all of the tracks are thoroughly sub-drained by lines of corrugated iron drainage pipes, ranging from 8 to 12 in. in diameter. Directly at the station, south of the Macy Street underpass, the drainage is effected by means of two independent systems, one on each side of the passenger subway which provides access to the station platforms. In each of these systems, single lines of 8-in. corrugated pipe extend longitudinally between tracks, and all of these lines, which collect the platform shed as well as the track drainage, extend to an intercepting cross drain of 24 and 30-in. reinforced concrete pipe. The cross drains of the two systems connect with a 36-in. reinforced concrete pipe along the east side of the station grounds, which carries all of the runoff to a storm-water sewer in Macy street.

In a more or less similar arrangement, the track throat for a distance of 500 ft. or more north of Macy street is completely subdrained, each group of tracks in this area being underlaid with at least one line of 8-in. or 10-in. corrugated pipe, with such laterals as are necessary to provide for special drainage conditions. In the entire sub-drainage system at the terminal, more than 63,000 lin. ft. of pipe was employed, including approximately 27,000 ft. of corrugated iron pipe of the sizes mentioned.

Fully Signaled and Interlocked

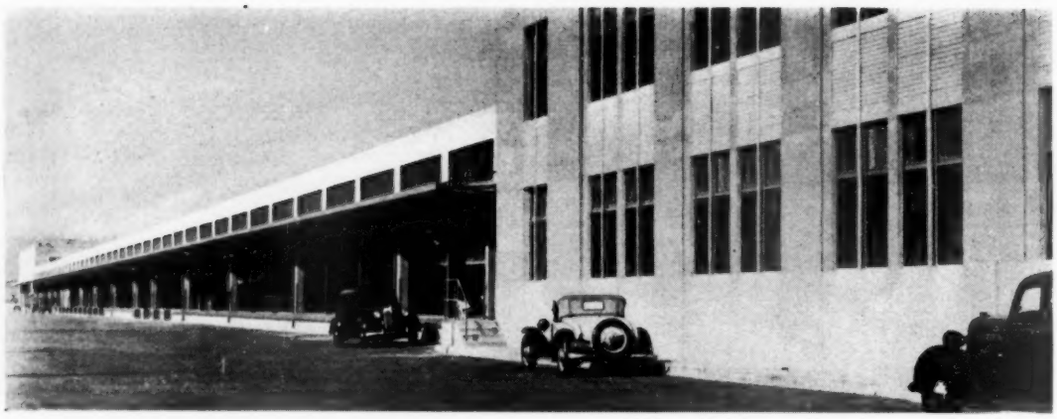
With the heavy train movements that the new terminal will be called upon to handle, the most careful consideration was given to the signal and interlocking facilities to speed up operations and to prevent delays to train and switching movements. Thirty-four passenger trains are scheduled to arrive at Los Angeles, and an equal number to depart, on certain days. Some of these trains, such as the Santa Fe "Super Chief" and "El Capitan" and the Union Pacific streamliner "City of Los Angeles," are operated every second or third day. As the station layout is stubbed at its south end, all arriving and departing trains, empty equipment, and light engine moves, as well as switching moves to handle head-end cars between trains and the mail baggage and express building, must be made through the track throat at the north end of the layout. Operation will be further complicated by the fact that train movements are bunched in certain morning and evening hours. On the average, about 60 moves will be made through the throat in the hour between 8 a. m. and 9 a. m., and about 57 moves between 8:30 p. m. and 9:30 p. m.

The interlocking directly within the terminal area is of the electro-pneumatic type, employing a Union Switch & Signal Model-14 machine with 138 working levers. Fifty-four levers control 104 electro-pneumatic switch machines and 50 levers control 83 interlocking signals.

By using searchlight-type dwarf signals, except on a bridge at the north throat, it was possible to so locate the signals that the tracks may be utilized to the best advantage in handling trains and switching moves. The signals operate to display three aspects—red, yellow, and green—and in effect operate as automatic block signals for trains traversing routes within the interlocking limits.

All tracks within the terminal are signaled for train movement in both directions. In order to close in a second train on a station track which is already occupied, as well as to facilitate switching moves, the last southward dwarf signal in a route to a station track can be cleared to display a yellow proceed aspect, when the station track involved is occupied. These last southward

Looking Toward the Terminal Over a Part of the Highly Flexible Track Arrangement Provided—Note the Terminal Interlocking Tower at the Left



Looking North Along the West, or Driveway Side, of the Large Utility Building, at the Track Level, Showing the Three-Story Section at Each End

signals leading to the station tracks involve no conflicting routes.

A six-track lead from the north end of the station layout and interlocking extends around a 9-deg curve 700 ft. long to Mission Junction interlocking, where the lines of the individual roads connect with the lead, the distance between the home signals of the two plants being 950 ft. All train and switching moves into or out of the terminal use this lead and must pass through Mission Junction. In order to utilize the lead between the two plants to the best advantage in handling peaks of either inbound or outbound moves, the six tracks are signaled for train movements in both directions and controls are established by a traffic-locking system set up by co-operative action on the part of towermen in the two towers.

Mission Junction Interlocking

At Mission Junction, additions to the track layout to connect the six-track lead with the lines of the various roads include three double-track and one single-track connections in addition to numerous turnouts and crossovers, so arranged that trains can be routed in either direction on all tracks. At this point, a new 104-lever section was added to the existing 144-lever General Railway Signal unit-lever electric interlocking, and the entire plant was reconstructed to include the additional power switches and signals. Of the 195 working levers, 94 are used to control 12 derails, 28 turnout switches, 6 double-slip switches and 2 turnout switches with movable point frogs, and 16 crossovers, while 96 levers control 96 signals, and 5 levers control 9 electric locks on switches that are not used frequently enough to warrant the expense of interlocking and handling from the tower. As a special means of facilitating following train movements on through routes, all of the signals in the route, except the first signal governing entrance to the plant, can be made non-stick by pushing a button below the signal lever.

Alternating current for both the terminal and Mission Junction interlockings is received from two sources to avoid the possibility of a power failure. However, if a failure should occur, the towerman at each plant can immediately cut in a Westinghouse gasoline-engine-driven generator emergency unit which will supply the necessary power for operating the plant.

At both plants the wiring exterior to the towers is in underground cable except for a span across the Los Angeles river. No metal is used in the outer protection of this cable. Approximately 50 per cent of the insulated wire and cable at the two plants has the mummy-type finish, and was furnished by the Kerite Insulated Wire & Cable Company, while the remainder has Okosheath outside covering and was furnished by the Okonite Company.

There is a microphone and loud speaker system of communication between the Terminal and Mission Junction towers, which enables the levermen at these two points to converse from any point at either interlocking machine. Because of the microphones, it was necessary to give both lever rooms an acoustical treatment. At Mission Junction a system of whistle repeaters was installed whereby approaching trains announce their approach, character and destination. This is accomplished by means of microphones located at considerable distances from the tower and by loud speakers located within the tower.

Baggage, Mail and Express Facilities

One of the most effective features of the new terminal is the accommodations afforded for the handling of baggage, mail and express with maximum convenience and efficiency, while at the same time isolating them so that they do not mar the appearance of the passenger facilities or interfere in any way with passengers. These accommodations are located at the track level between the station proper and the first platform track, and involve essentially the long, one-, two-, and three-story utility building; a car-floor-height covered working platform; six mail, baggage and express car tracks; and three wide paved driveways which serve all of these facilities and have ramp connections to the street level at both ends of the station site.

The primary unit of these facilities is the utility building, which is 1,227 ft. long by 90 ft. wide at its street, or ground-level floor, and 806 ft. long by 40 ft. wide at its track-level floor, with a three-story section, 162 ft. long by 60 ft. wide at its north end for railroad mail, a telephone exchange, telegraph operators, and for conductors' and Pullman rooms; and a three-story express office unit 121 ft. long by 65 ft. wide at its south end. The first story of the building is of reinforced concrete construction, and is of such area that its upper deck not only carries the smaller second and third floors, but also affords space for a wide uncovered driveway along the west face and around both ends of the upper floors, at the track level. This driveway has a ramp connection down to Macy street at the north end, and a second ramp down to the level of Aliso street at the south end. Furthermore, through its extension around the building at its south end, it has connection with two other wide concrete driveways on the east side of the building, which are served by four head-end car loading and unloading tracks. Thus, utilizing the first story roof of the building in part for a driveway, wide flexibility of trucking operations is permitted about the track-level facilities.

with almost as much ease and convenience as though they were located at the street level.

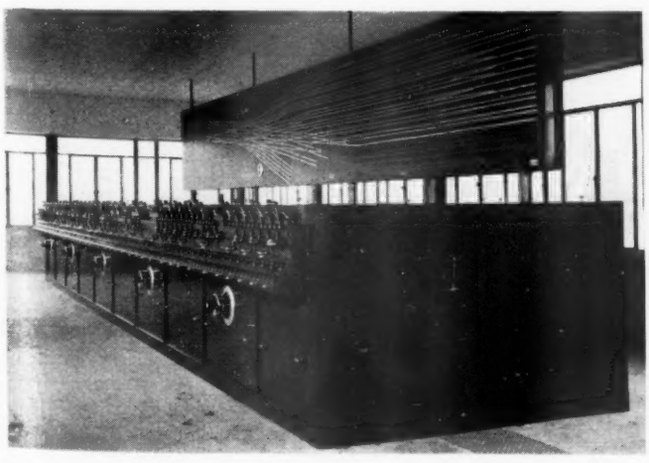
The entire driveway area about the baggage, mail and express facilities at the track level, including the two ramps leading to the street level, are adequately and attractively illuminated for night operation by 50 Westinghouse octagonal senior bronze luminaires and 21 octagonal junior pendants.

The space utilization or assignment of the ground floor of the building is essentially the basis for the term "utility building". Here, centrally located, are the passenger train concourse, the departure and arrival lobby and the incoming passenger reception hall, while immediately to the north are the hand baggage checking space and a large baggage room, and immediately to the south are porter's quarters, a janitor's room, Travelers' Aid office, news-press room and the terminal power plant. At the extreme south end, forming the ground floor of the three-story railway express section, are offices and public reception areas of the express agency, while the extreme north end area is assigned to news and supplies storage, brakemen's and Pullman porters' locker rooms, Pullman supply space, and for housing transformers.

Large Track-Level Platform Area

The building at the track level, except for the upper stories of the three-story units at the ends, is essentially a covered trucking platform with a steel frame superstructure, closed in on both sides by rolling steel doors, surmounted by continuous panels of sectional steel sash. This platform, of concrete construction with a Master Builders Metalicron floor hardener wearing surface, is given over entirely to baggage and express handling, the north end being occupied by the former and the south end by the latter. The main roof over the platform consists of a series of light steel trusses supporting a laminated wood deck which is covered with three-ply built-up roofing. This is extended out a distance of 7 ft. on the driveway side by a canopy to protect truck loading and unloading operations, and on the track side a distance of 20 ft. by a similar canopy to protect car loading and unloading operations. Both of these canopy extensions are supported from the building faces by steel truss brackets, enclosed on the underside instead of on top by Truscon galvanized Ferrobord, to give the same streamlined effect as the passenger platform sheds.

The two upper floors of the express unit at the south end of the building are of reinforced concrete construction throughout and are used exclusively for express offices. The upper floors of the mail unit at the north end are used only in part for handling mail. The second, or track-level floor, except for a small yardmaster's office, is an open expanse for the transfer of sacked mail and parcels between trucks and cars, and vice versa, and here the floor is finished with a Calrock asphalt block wearing surface. Wide doorways are provided on both sides, fitted with rolling steel doors and overhanging canopies. The third floor, on the other hand, is divided into various size areas used as a telegraph and telephone office, railroad and Pullman conductor's rest and locker rooms, a Pullman agent's office, storage space and a railroad police headquarters. The roofs over both of these units are of flat-slab construction, protected by three-ply built-up felt and asphalt roofing.



The Interlocking Machine Directly at the Terminal, Located in a New Three-Story Tower, Is of the Electro-Pneumatic Type, with 138 Working Levers

Steam Supply and Power Distribution

All of the steam requirements at the terminal for building, car and hot water heating are furnished by the three 325-hp. water-tube boilers (with rating of 300 per cent) housed in the power plant area on the ground floor of the utility building. These boilers, which are natural-gas-fired, with an oil-fired standby unit, have a maximum pressure rating of 250 lb., but are operated at a working pressure of 150 lb. A feature of the boiler installation, to preclude the use of a high, natural-draft stack, which would have been unsightly, is the induced draft system employed, utilizing draft fans driven by a steam turbine. This arrangement required stacks which extend only about three feet above the shed roof of the utility building.

The principal auxiliary equipment in the power plant includes a Zeolite plant, which supplies de-aerated and softened water to the boilers; two boiler feed pumps; a hot water supply boiler, heated by exhaust steam; and three hot water circulating pumps. Other mechanical equipment about the terminal includes two chilled water pumps for distributing the drinking water supply, and two Worthington air compressors, each of 500 cu. ft. per min. capacity, one electrically driven and the other steam driven, which supply air for the pneumatic tube system of the terminal, for the operation of all of the power-operated track switches, and for train testing.

The Electrical System

Electric power for station lighting and other purposes is purchased from the Bureau of Power and Light of the city and is brought into the terminal in two primary cables as 4,800-volt, 3-phase, 60-cycle current. The main distributing board is located in a vault under the south ramp to the utility building, and from here eight primary feeders radiate to five distributing points located strategically about the terminal property. The train yard distribution is handled through two Westinghouse dead-front, dead-rear combination carbon and De-ion breaker switchboards located in one of the distributing vaults. The five distributing points, each with a transformer, have an aggregate current capacity of 2,880 k. v. a.

A feature of the electrical system is that each passenger platform, along both sides, is equipped with power outlet receptacles at 80-ft. intervals for operating the air conditioning motors on coaches and Pullman cars while they are being prepared for outbound movements. These receptacles, of which there are a total of 216 through the platform area, supply 220-volt, 60-cycle, 3-phase current. The power supply to this system of outlets is arranged so that 140 of them may be used simultaneously.

Another feature of the electrical system is the pro-

vision of battery-charging outlets in both the baggage, mail and express-handling area and the private car "hold" yard, there being a total of 18 in the former area and 19 in the private car yard. All of these outlets, equipped with waterproof receptacles, are located in the concrete driveways about these areas.

Details of Building Construction

All of the larger station buildings are of reinforced concrete construction, on concrete pipe foundations, and throughout their design special care was given to the reinforcing and other details to insure against damage in the event of seismic disturbances. At many points special diagonal bracing and horizontal struts were incorporated to help resist the horizontal stresses produced by earthquakes, and to tie the individual units together securely, a feature which has been found particularly desirable in earthquake-resistant construction.

At the same time, complying with the requirements of the Pacific Coast building code, each of the individual building masses was made structurally independent of adjoining masses through the medium of wide expansion joints, closed by fragile facings where desirable for appearance, or, where in the floors, by special metal slide plates. The width of these joints varies from two to four inches, the larger openings being provided between the larger and taller units.

This precaution was felt to be particularly desirable where units of varying height and mass were involved, but it was also carried into the utility building construction, which, despite its general appearance as a single continuous structure, is divided into seven completely independent units by means of six, four-inch open joints. Another feature employed in the interest of earthquake-resistant construction, was the use of diagonal roof sheathing.

In spite of the generally good foundation conditions which prevailed over the station area, due to the presence of river sand and gravel, all of the main building units were given support on 1,008 poured-in-place concrete piles, varying in depth from 10 to 30 ft. below the basement level, depending upon ground conditions and the loads to be supported. Beneath wall areas generally, one to three lines of piles were employed with concrete mats cast in place, except at main column points, where the piles were arranged in clusters to afford adequate bearing capacity.

The only exceptions to the use of straight, poured-in-place piles was the use of Bertram piles with belled-out bases for foundation support of the Aliso Street retaining wall and the utility building.

In all of the extensive concrete work involved in the building units, Douglas fir plywood forms were used, a total of approximately 150,000 sq. ft. of ⅝-in. plywood panels being employed for this purpose, in addition to 500,000 ft. b. m. of other form lumber. The most unusual feature in this connection was the use of Celotex board form linings on all exposed surfaces, the purpose of which was to reproduce in the concrete face the faintly mottled effect of the Celotex surface itself. Approximately 100,000 sq. ft. of ½-in. Celotex board was used for this purpose.

Employing this type of lining to produce the surface finish desired was an expedient developed by those in charge of the work, and, because of the character of the material, which will absorb moisture, considerable experimentation had to be done before its use was practicable. It was finally developed that the Celotex made an excellent lining material, without excessive absorption of moisture from the concrete or a tendency to adhere to the concrete surface, if given a single coat of boiled linseed oil within a few hours before the concrete was placed. However, the lining could be used only once.

After the forms were removed and the Celotex lining stripped from the face, light brushing was usually sufficient to remove any trace of the fibre texture which might have adhered to the concrete. At this time also, such minor lining joint marks as might appear were carefully removed. Later, at the proper stage in the curing of the concrete, it was painted an "off white" with two coats of either of two specially prepared Portland cement concrete paints, one known as Cemelith, which was used principally on the front faces of the station building and the tower, and the other, known as Bondex, which was used elsewhere.

Track Adjustments and Coach Yards

As might be expected, adapting their present track layouts within the city to fit in with operations at the new terminal required a considerable number of track adjustments on the part of all three roads involved. It also brought about, as one of the features of the project, the abandonment for passenger service of several thousand feet of Southern Pacific tracks in Alameda street, these tracks to remain and be used in the future only for industrial switching at night. The major track adjustments necessary by the three roads occurred near Mission tower, along the Los Angeles river, where they were required to build connections with the lead to the terminal. The Santa Fe, with its main tracks on the west side of the river, built a wye connection with the lead, entirely on solid ground, but the Union Pacific, with its tracks on the east side of the river, was required to construct a bridge crossing for its connection. The Southern Pacific already had a double-track bridge at this point, carrying its El Paso line, but this bridge had to be altered materially to adapt it to a new double track connection leading to and from the north.

For the time being, at least, both the Santa Fe and the Union Pacific plan to use their existing coach yards, the facilities of the former road being located in the vicinity of its old passenger station, at Eighth street, while the latter's facilities are located at Hobart, about six miles south and east of the new terminal. The Southern Pacific, on the other hand, because its existing coach yard at Eighth and Alameda streets is accessible to the new terminal only by a circuitous route involving numerous grade crossings, has built an entirely new modern coach yard at the site of its car repair shops on the east bank of the Los Angeles river, with close connections with the new terminal.

Work Directed by Committees

The new Los Angeles Union Passenger Terminal was constructed under a plan dividing the ownership costs of the participating roads on a modified use basis of 23 per cent to the Union Pacific, 33 per cent to the Santa Fe and 44 per cent to the Southern Pacific; the operating expense being on a use car basis of 12 per cent to the Union Pacific, 33 per cent to the Santa Fe and 55 per cent to the Southern Pacific.

The project was developed as to general plans, distribution of costs and consummation of agreements by committees, each consisting of one representative from each road. The committees formulated included those of presidents, vice presidents, general managers, chief engineers, attorneys and land agents. The executive officers delegated authority to the Board of Managers

(*Continued on page 786*)

Hearings Begun on Wheeler Rail Revamping Measure

Montana solon urges a new reorganization court which would have exclusive jurisdiction in carrier bankruptcies — R. F. C. and Commissioner Splawn approve

WASHINGTON, D. C.

HEARINGS on Senator Wheeler's bill, S. 1869, which would make important changes in section 77 of the Bankruptcy Act by creating a special railroad reorganization court to handle carrier bankruptcies, got under way before the Senate committee on interstate commerce on April 27. Besides Chairman Wheeler, other members of the committee in attendance at the opening session were Senators Truman, Democrat of Missouri; Minton, Democrat of Indiana; Schwartz, Democrat of Wyoming; Hill, Democrat of Alabama; Austin, Republican of Vermont; White, Republican of Maine; and Reed, Republican of Kansas.

Senator Wheeler announced at the beginning of the hearing that four or five days would be devoted to his bill and that following the conclusion of these hearings, testimony would be taken on the Chandler voluntary railroad reorganization bill which has passed the House and is pending in the Senate. Briefly, the Wheeler bill provides for a long-range program of railroad revamping, while the Chandler bill will probably be limited to a period of not longer than a year. Senator Wheeler made it clear to members of his committee that the two bills were not antithetical but were, rather, complementary.

Splawn and Lowenthal Testify

The first two witnesses were Interstate Commerce Commissioner Walter M. W. Splawn, who briefly sketched the status of railroad reorganizations under section 77 and under the old equity receivership and presented several exhibits showing the financial picture of those roads now being reorganized, and Max Lowenthal, counsel for the Senate interstate commerce subcommittee which, for the past three years, has been investigating holding companies and the financial practices of the nation's railroads.

The bill, S. 1869, is a direct outgrowth of the subcommittee's investigations of railroad holding companies and pending railroad reorganizations and incorporates the recommendations of the subcommittee insofar as they affect railroad revamping. Besides setting up a special reorganization court to take over the work of the United States District Courts and much of the work of the Interstate Commerce Commission, such as the allocation of new securities and the determination of priorities in a carrier's financial hierarchy, the bill makes several important amendments to section 77, which, the authors of the measure hope, will clear up some of the ambiguities which are now present in the Bankruptcy Act as amended.

Commissioner Splawn began his testimony by outlining the present railroad financial picture. In the case of the Chicago & North Western, the railway operating income dropped from $154,732,947 in 1929, to $81,055,869 in 1938, while the net income after fixed and contingent charges for 1929 was $15,599,056 as compared with a deficit of $15,275,983 for 1938. The Chicago, Milwaukee, St. Paul & Pacific showed a railway operating income for 1929 of $171,361,385 as compared with $99,436,846 in 1938, while the net income after fixed and contingent charges was $7,074,014 in 1929 as compared with a deficit of $17,996,270 in 1938. Similar figures for the Chicago, Rock Island & Pacific; the Erie; the New York, New Haven & Hartford; and the Seaboard Air Line which showed roughly the same drastic decline in total revenues and earnings were read into the record by Commissioner Splawn.

Commissioner Splawn told the committee that he personally favored the bill because of the fact that it would relieve the commission of much work that it is not competent to do. The commission, he said, is not a judicial body and doesn't have time to develop experts in bankruptcy law. He added, however, that the commission does have men who would make very good judges for a railroad reorganization court.

In the opinion of the commissioner, section 77 of the Bankruptcy Act needs clarification. He went on to point out that all shades of opinion prevail among railroad reorganization lawyers as to the meaning of many parts of the statute. Answering the criticism that the creation of a special court would invalidate and waste the large amount of work already performed by the commission in the cases now pending before it, the commissioner said that if cases have already been certified to a federal district court, the reorganization court can determine whether to leave them with the district court or take them under its own jurisdiction. It was later pointed out that this criticism does not carry too much weight in view of the fact that the commission has, to date, certified only one large case, that of the Chicago & Eastern Illinois, to the federal district court.

Lowenthal Analyzes Measure

Mr. Lowenthal undertook the task of explaining in detail the various sections of the new bill and just how they would change the old law. This job took up half of the April 27 session and all of the April 28 session of the committee, which was sitting during the entire day. He began by explaining that the bill stems from the Splawn-Eastman-Mahaffie report of last year, the Committee-of-Six report to the President, and testimony of witnesses before the Wheeler rail investigating committee.

The special court set up in the bill would, in Mr. Lowenthal's opinion, make for "sounder reorganizations" because of the fact that the court would be made up of men who know and understand the problems and intricacies of railroad reorganization. District judges, he

observed, are not selected for their ability to reorganize railroads, and he went to to say that he had known several district judges who expressed themselves as thoroughly disliking the chore of handling reorganizations. Some district judges, according to the Wheeler committee counsel, have aptitudes which lie in fields other than railroad reorganization. He did not blame them for this, as he went on to say that the subject of railroad revamping is a large and complex one and deserving of special study instead of being handled along with other phases of the law. Also, he said, reorganization work is much more an administrative process than it is real court work. For these reasons, Mr. Lowenthal believed that the special court should be created with judges who are trained in this field and who will not have to bother with other legal business but can give all their time and talents to these problems.

Another good feature of the court, the witness said, is that it would be functioning in Washington, D. C., under the eye of the Congress. This, he thought, would have a "salutary effect" on the court. Also, the reputation of the court would stand or fall on its record in reorganization cases, so that it would have to do a good job or face criticism, while district courts more or less handle these cases as a sideline, giving them only cursory attention.

Sees Continued Need for Court

Senator Hill wanted to know whether the witness believed there would be enough work to "keep this court busy ad infinitum." Mr. Lowenthal replied, "Yes, I'm afraid that there will be" and went on to cite threats of prolonged litigation which have been made to the commission by various attorneys in reorganization cases.

Mr. Lowenthal next proceeded to take up objections to the bill which have been received by the drafters and explained his answers to them. Some people, he said, had cited the "sad" experience of the Commerce Court in 1910 to 1913 and had predicted that this court would run up against the same trouble that had beset the Commerce Court and which led to its abolition. The witness explained that he had been directly connected with the Commerce Court and that he believed the real trouble with it lay in the fact that it tried rate cases *de novo* instead of reviewing the facts found by the commission. He said that shippers bitterly resented this trial of cases *de novo* by the Commerce Court and this practice led to its downfall. The new court, according to Mr. Lowenthal, would not have the power in certain cases to try cases *de novo*. In other words, it would have to accept the findings of the commission regarding certain matters.

Another objection was that the court would be in Washington and the parties would be put to a great expense in coming here to transact their business. In answering this objection, Mr. Lowenthal pointed out that the court can remit certain local matters to a district court for local treatment, thus obviating some trips to Washington by counsel and others interested in the case. Also, he pointed out that the bill provides that the court can sit anywhere in the United States or its possessions, and furthermore, that the court can send one of its judges to any part of the country to take evidence. He told the committee, however, that the major business of the court would be transacted in Washington.

Turning to the objection that the work already done by the commission would be junked, Mr. Lowenthal pointed out that the drafters of the measure had no such intention, and Senator Wheeler assured the committee that the bill would provide that not only the work done by the commission but also the work done by the district courts would stand.

Under the bill as drafted the court would be authorized to appoint only independent trustees, men who had no previous connection with the railroad. Much criticism has been expressed in certain reorganization cases that the courts have appointed men as receivers and trustees who were intimately connected with the affairs of the bankrupt company, some receivers having held the office of president of the company. The commission would lose its power to fix the maximum compensation for trustees and counsel under the provisions of the measure, this power being given to the new reorganization court.

I. C. C. Will Determine Capitalization

All questions of capitalization, fixed charges and other financial matters will remain with the commission for its determination, but the reorganization court will determine the allocation of new securities after the commission has decided how large the capital structure shall be. Senator Minton thought that there might be considerable delay by shuffling the reorganization plan back and forth between the commission and the court. Mr. Lowenthal assured him that he did not think this would be the case, and went on to point out that the court could certify certain questions of fact to the commission without sending back the entire plan as it now has to do if it does not agree with it in its entirety.

Senator Wheeler said that he had heard much criticism of the idea of basing the fixed charges in new capital structures on the earnings of the past six years and that he thought that this period was too short. He went on to explain that the drafters of the bill had to set some figure and determined on six, but that there was no idea of making this a hard and fast rule. Since several of the railroads now in trusteeship are objecting to this provision in view of the fact that it would force them to base their fixed charges on the average annual earnings during the past six years which have been very lean ones, it is expected that this provision will be greatly modified when the bill is reported by the committee.

Jones and Clay Approve Court

The views of the Reconstruction Finance Corporation were given to the committee at its May 1 session by Chairman Jesse Jones and general railroad counsel Cassius M. Clay. Both took the position that the creation of the reorganization court would be "very helpful." Mr. Jones said that he had not read the entire bill, but had discussed it with Mr. Clay. Also, Mr. Jones doubted the advisability of fixing as a measuring stick for future valuations the earnings for any given number of years. Rather, he thought that the commission should be free to determine fixed and contingent charges and capital control.

Explaining his objection to the six-year provision, Mr. Jones said that so many factors would have to be taken into account in making this a yardstick for future valuations. He went on to point out that during a particular six-year period the management of a road might not be good, its maintenance might be below standard, or its traffic might be considerably below normal. There are so many factors involved, he said, that he would not want to fix value on the earnings for a six-year period. Rather, he believes that the standard for capitalization should be flexible, and he would leave it to the judgment of the commission.

Mr. Jones also told the committee that it would be "highly desirable" to salvage the work already done by the commission in the pending reorganization cases. Asked by Senator Wheeler what he thought about the

provision fixing the fees to be paid to counsel in reorganization cases, the R. F. C. chairman told the committee that it "couldn't be too drastic on the control of fees and expenses." "The railroads of the country," he continued, "have paid the penalty of criticism from the public for paying out ridiculous and exorbitant fees in reorganization cases."

The first witness opposing the bill was Samuel H. Cady, vice-president and general counsel for the Chicago & North Western, who began by taking the position that there was no real need for such a court. In answer to a question put by Chairman Wheeler as to whether or not in this respect he differed with those railroad presidents who made up management's part of the Committee-of-six, he replied that he did. His first argument was that such a court would delay the reorganization of those roads where hearings before the commission are already completed. Also, Mr. Cady thought that some powers of the proposed court are "ill-advised."

Cady Fears "Junking" of I. C. C. Work

According to the C. & N. W. attorney, there is no royal road to the knowledge of reorganization matters that the members of the commission now possess. He thought that it would take months of study to duplicate the work already done by the commission. He then proceeded to assert that the present bill would "junk" the work already accomplished by the commission. Senator Wheeler spoke up and said that the witness was wrong. Then followed a verbal exchange between Wheeler and Cady in which the former observed that if witnesses like the latter would come down to Washington in a spirit of helpfulness instead of in a spirit of antagonism, they would better serve the interests that they represent.

"After all, we're not so dumb down here," the Senator from Montana said. "I'm not so dumb as to think that you Senators are dumb," replied Mr. Cady.

Mr. Cady then pointed out to the committee that he interpreted the bill to mean that the new court could, upon granting a rehearing, try a completed case *de novo*. Senator Minton did not think that this was the case. The court would, he thought, reopen only those cases where there might exist sufficient grounds for so doing. Answering a query of Senator Schwartz, the witness said that what he really wanted was to prevent the bill from applying to the case of the C. & N. W.

Senator Wheeler read into the record reports from the Wall Street Journal to the effect that Commissioner Meyer had criticized attorneys of the C. & N. W. for unnecessarily delaying the reorganization of the road. Mr. Cady said that he had no knowledge that he or his company had ever been criticized by a member of the commission on this score.

Turning to the six-year provision of the bill, Mr. Cady said that basing the future capitalization of a road on the earnings of the past six years was unfair. He went on to point out that on this basis, the capitalization of his road would be placed at $113,000,000 or a reduction of $337,000,000 over what it now is. Mr. Cady said that he agreed with Mr. Jones that the commission should be given the power to determine the capitalization of roads in reorganization. Senator Wheeler assured him that the six-year provision would be changed so that it would meet objections raised to it.

Mr. Cady also objected to the court sitting in Washington under the eye of the Congress. He said that he thought the judiciary was supposed to be an independent branch of the government and not controlled by the Congress. Senator Wheeler interrupted to ask the witness if he knew a judge that dispensed fair and impartial justice. M. L. Bell, general counsel for the Chicago, Rock Island & Pacific and a spectator at the hearing, spoke up and said that he considered Federal District Judge Wilkerson of Chicago as coming within that category.

Tobey Attacks Wilkerson

This answer prompted Senator Tobey, Republican of New Hampshire, to begin a violent five-minute verbal attack on Judge Wilkerson. During the course of his verbal lashing of Judge Wilkerson, Senator Tobey pointed out that Judge Wilkerson had handled the 1928 receivership of the Milwaukee and is now handling the second receivership of the Milwaukee and also that of the Rock Island.

Senator Tobey asked Mr. Bell whether or not he was satisfied with the way Judge Wilkerson was handling the Rock Island case. Mr. Bell replied that he was. Returning to Mr. Cady's testimony, Senator Wheeler asked him what he thought about the provision allowing the new reorganization court to name and fix the salaries of trustees. Mr. Cady did not think that they should be named by the court. Rather, it was his belief that local district courts could do a better job of choosing trustees because they would know the local men and the local conditions involved in the cases. Senator Wheeler did not agree, saying that there was ample ground for criticism of some of the appointments of trustees that have been made by district courts.

Monon Trustee Testifies

The first witness at the May 3 session of the committee was Holman D. Pettibone, president of the Chicago Title & Trust Co. and the trustee of the Chicago, Indianapolis & Louisville, who appeared in opposition to the bill. He felt that the reorganization court would prove a detriment and would result in congestion and greater delay in completing the revamping of railroads. He admitted that there had been justified criticism of the handling of railroad reorganizations by certain federal district courts, but he went on to say that by creating one central court to handle all this work, this criticism from various sources would be centered on one group of jurists.

Mr. Pettibone also believed there should be independent trustees and told the committee that since the death of the president of the Monon, he had run the road himself and had been entirely independent. Senator Truman commented that this was a rare condition of things. Also, the Monon trustee disapproved of the six-year provision for the determination of the amount of the capitalization. He would rather leave this determination to the commission.

W. R. C. Cocke, general counsel for the Seaboard Air Line, also appeared in opposition to the reorganization court as proposed in the bill, and offered some suggestions as to how the reorganization process can be speeded up while at the same time preserving the present court set-up. He thought that there were some "fine" features of the bill, but he went on to tell the committee that in his opinion, it would be a "most serious mistake to lodge in a central court questions of public interest which are now lodged in the commission."

The Seaboard general counsel would give the district courts power to allocate new securities and determine priorities, but he would have the commission fix the total capitalization for a road in receivership. Instead of setting up a new court, Mr. Cocke would have the Circuit Courts of Appeal supervise certain matters such as the fixing of salaries and fees for counsel. Senator Wheeler

objected to this idea, saying that he felt the Circuit Courts of Appeal are much too busy at present to do this type of work. It was also pointed out that to do this work properly, the Circuit Courts would have to go into the entire case to determine whether or not the fees set by the lower courts were proper. Senator Austin spoke up to say that the Circuit Courts could do this work now if they felt so inclined.

Thinks Court Could Not Do Work

Mr. Cocke also felt that no three men or five men could possibly handle the amount of detail that is now handled by the district courts which are handling the pending railroad trusteeships. Senator Wheeler replied that he had no intention of having the court handle all the details, but he did not explain who would have to take care of them. Mr. Cocke also thought that the present bill raised grave constitutional questions of whether or not Congress can transfer an equity receivership into a section 77 case and move it to a central court. "Congress can't," he said, "by waving a wand, transmute a receivership into a trusteeship."

Discussing the case of his own road which has been in equity receivership for the past nine years, Mr. Cocke said that he had always believed that the road could not be successfully reorganized unless it went into reorganization under section 77. He also asserted that the Seaboard would have to "go through the wringer" before a successful reorganization could be consummated.

Luther Walter Testifies

At the afternoon session Luther M. Walter, co-trustee for the Chicago Great Western, gave the committee his views on the bill. His first request was that the committee insert a provision in the bill which would exempt reorganized companies from franchise taxes which are exacted by the states in which the companies operate. Mr. Walter's contention was that the theory of the tax was to tax new money which was put into a company, but that in the case of a reorganized company, no new money was coming into the company, but only old securities were being exchanged for new. He pointed out that the new company upon reorganization would be forced to pay six mid-western states upwards of $200,000 for franchise taxes if the Congress does not make an exemption for it. This type of tax would also apply to other companies in reorganization, he pointed out.

Turning to the subject of the new court, he said that he opposed it, but that if the committee was set on creating one, he would have it leave the pending cases in the district courts until they are finally concluded, thus giving the court jurisdiction of new cases only. Also, instead of having the court appointed by the President, he would have the Chief Justice of the United States Supreme Court designate three judges from the Circuit Court of Appeals to sit in any judicial district to handle reorganization cases.

Senator Truman, who was presiding at the afternoon session in the absence of Chairman Wheeler, said that he could see no merit in this proposal in view of the fact that the Senate judiciary committee now has pending a bill to provide more judges for the Circuit Courts of Appeal. It seemed to the Senator from Missouri that the courts were already too busy to have any of their members designated to sit in a different capacity.

Mr. Walter also objected to that part of the bill which, he thinks, provides that the trustee shall not appoint a former chief counsel of a railroad as the chief counsel of the company while it is in receivership. He admitted that there had been cases where the actions of former chief counsels had caused criticism, but he felt that the actions of a few men should not condemn all the other chief counsels of the country's carriers. Mr. Lowenthal pointed out to Mr. Walter that the bill did not prohibit the trustee from employing the chief counsel, but only denied him the right of employing the latter in the position of chief counsel.

Mr. Walter also objected to the six-year provision for determining the capitalization of reorganized companies, saying that he would leave the matter to the commission as would Jesse Jones, chairman of the R. F. C. He wanted no limit on capitalization and would also have the committee authorize the issuance of warrants so that the present common-stockholders would have a chance to buy back into the company if it should earn enough to provide returns on new capital stock. Senator Truman disagreed, saying that he could see no virtue in issuing millions of dollars of "worthless" stock.

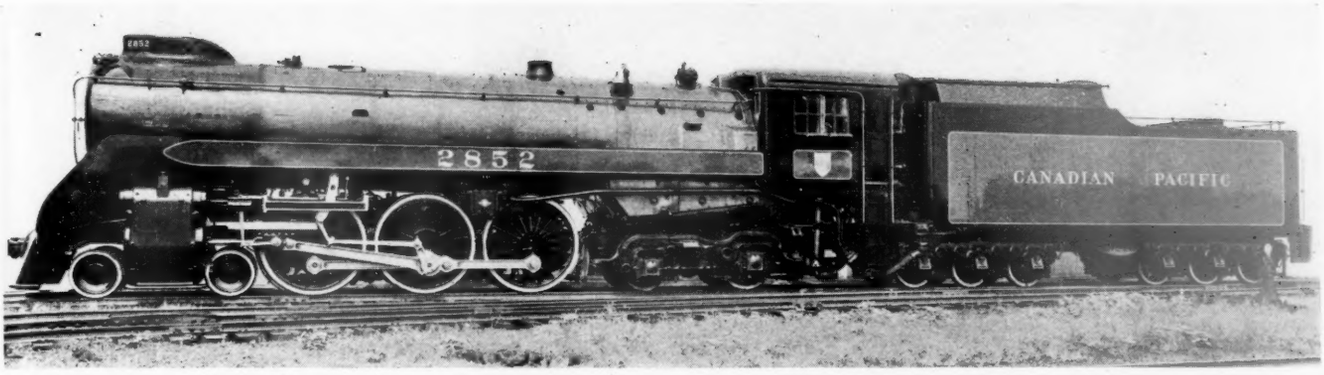
Wheeler Attacks Walter

During the morning session Senator Wheeler attacked Mr. Walter, saying that he had no business making a speech before the Traffic Club of New York on the previous day in which he said that the pending bill, S. 1869, was being pushed by railroad labor in the hope that by cutting down the capitalization of various roads, labor would be in a position to get a larger share of the earnings. Senator Wheeler said that the statement of Mr. Walter's was "untrue, grossly misleading, and unfair" and should never have been made as it would result in prejudicing his audience.

At the afternoon session Senator Johnson, Democrat of Colorado, asked Mr. Walter why he had not mentioned this fact during his testimony and why he didn't tell the Senate committee what he told the New York Traffic Club. Then Mr. Walter went on to explain what he had said in New York, pointing out that he had told his hearers that labor definitely has an interest in the bill and that George M. Harrison, chairman of the Railway Labor Executives Association, is on record as favoring a reorganization court. He said that labor was taking the position that by cutting down capitalizations, more money would be available for their share. This attitude, he condemned.

Then Senator Johnson brought up the matter of Mr. Walter's attitude on labor which was discussed a length during the recent hearings on the nomination of Thomas R. Amlie for the commission. During a heated argument Mr. Walter asserted that the railroad brotherhoods would never have gotten their increase during the fall of 1937 had it not been for the attitude of the Union Pacific and the Pennsylvania. Both these roads, he said, decided to desert the stand taken by the other roads of the country and granted the wage increase with the result that the other roads went along. "That's why," he said, "I say that the A. A. R. is run by rich roads for rich roads."

Senator Johnson brought up the matter of the Chicago Great Western's refusal to abide by an Adjustment Board decision. Mr. Walter admitted that this was the case, but denied that the award was a just one. He decried the fact that there was no means of appeal from Adjustment Board decisions and described the process as "un-American." He also told the committee that there would be a bill pending in the Senate and House to amend the Railway Labor Act, had he been able to get a single Senator or Representative to introduce it. "I have one vote," he observed, "and railroad labor has a million."



Canadian Pacific Semi-Streamline 4-6-4 Type Locomotive, Built By Montreal Locomotive Works, Ltd.

Hudson Type Passenger Locomotives for the Canadian Pacific

Recent order of 10 units, built by Montreal Locomotive Works, brings total of this type in C. P. R. service to 60

IN 1929 the Canadian Pacific placed in service the first of a group of 4-6-4 type passenger locomotives which were known as the Class Hla, 2800 series. These locomotives were designed to haul heavy passenger trains in comparatively high-speed service on various divisions of the system. Experience with the original ten locomotives was such that in the following year, 1930, ten additional units were built. These twenty locomotives were of conventional design. The second group of ten, known as the Hlb class, were described in the *Railway Age* for March 28, 1931, page 617. In 1937, thirty locomotives, known as the Hlc class, were delivered to the C. P. R., followed in 1938 by ten units of the Hld class. All of the sixty locomotives were built by the Montreal Locomotive Works. The latter two classes, comprising a total of forty units, are of the semi-streamline design. This article describes the Hld class.

A total of 12 out of the 60 locomotives of the several classes mentioned are equipped with boosters. Aside from this and the semi-streamline shrouding of the most recent designs no major differences in design exist.

On the semi-streamline locomotives, the shrouding has been designed to simplify the general external appearance and to effect a more satisfactory lifting of smoke. While the boilers are of the conical type, the planished-steel jacket is cylindrical in form around the barrel of the boiler, resulting in straight boiler lines from the front end of the boiler to the front of the firebox. The piping and fittings, wherever possible, have been concealed under the jacket. The feedwater heater has been lowered in order to reduce the prominence of its projection. A streamline cowl around the stack embodies the number plates and also conceals the whistle. The pilot and front-end shrouding is of plate construction, extending across the whole front of the locomotive. The smokebox front is plain in design and the Pyle-National headlight is set into the front with the lens flush with the outside contour. Access to the front is through a removable center section.

The boilers on these locomotives are of the conical type, built in three courses with combustion chamber. An unusual feature of the design is that the steam dome has been omitted. Steam enters an internal drypipe through a series of serrations at the rear end of the pipe. These openings are milled channels $\frac{5}{16}$-in. wide separated by $\frac{3}{8}$-in. bridges. There are 65 of these openings in the top of the drypipe extending over a length of 3 ft. $8\frac{11}{16}$ in. The projected length of each opening, across the pipe, is about $4\frac{1}{2}$ in.

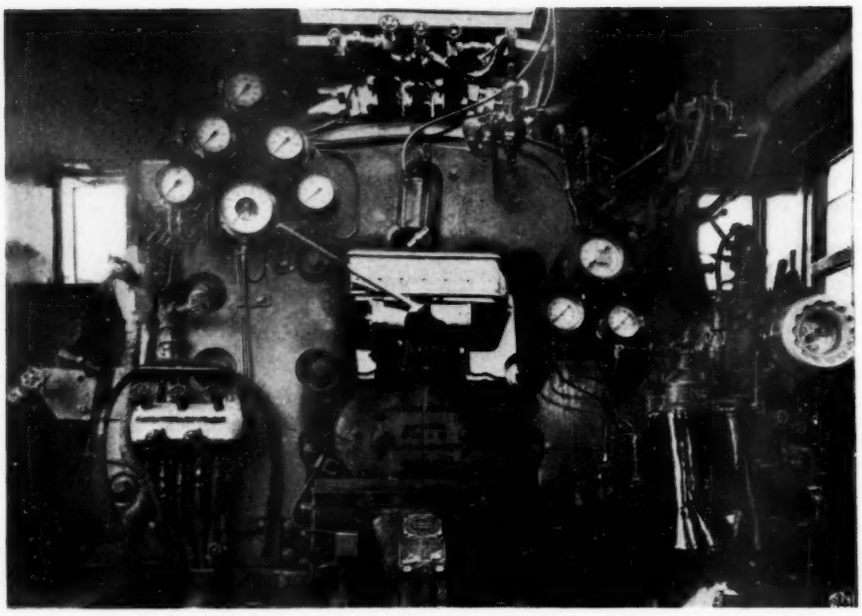
All of the plates in the boilers, with the exception of the wrapper sheet and liners, are of nickel steel. An extensive installation of Flannery-type flexible staybolts is used in the breaking zones of the firebox. Flexible stays are also used in the combustion chamber except for 16 rows on the bottom where rigid hollow bolts are used. The boilers have Type E superheaters with built-in multiple throttle. The fireboxes are equipped with a brick arch having four $3\frac{1}{2}$-in. arch tubes secured in the throat sheet and back head in arch-tube sleeves.

Other special boiler equipment consists of an Elesco Type H-40 feedwater heater, Type 2-W-60 Hancock Inspirator of 6,250 gal. capacity, Franklin No. 8-A firedoor, Okadee blowoff cocks, and World Consolidated flange-base safety valves. The grates are of the Rosebud type and fuel is fed by a Standard type HT stoker.

The Running Gear

The foundation of the locomotive is a General Steel Castings Corporation steel-bed casting in which the cylinders and air reservoirs have been cast as an integral part. The engine, trailing, and tender trucks are also the General Steel Castings Corporation's design.

With the exception of the engine truck, all of the journals run in plain bearings. SKF roller bearings of the inside-journal type are used on the leading truck. The front and back driving journals are $10\frac{1}{2}$ in. by 14 in. and the main journals are 12 in. by 14 in. The main



The Cab Controls and Gages Are Conveniently Located

journals run in Grisco type driving boxes and the front and back driving boxes are of the conventional type. The box hub liners are cast bronze and the crown brasses are nickel bronze. All driving boxes are equipped with Franklin grease lubricators and spreader castings. The driving wheels are the conventional spoke type mounted on axles with ground journals. The main crank pins are hollow-bored nickel steel.

The wheel diameters are as follows: leading truck, 33 in.; drivers, 75 in.; front trailing truck, 36¼ in.; and rear trailing truck, 45 in. The tender-truck wheels are 36¼-in. diameter.

Five of the locomotives of the Hld class are equipped with a Franklin booster, driving on the rear trailing-truck axle.

The cylinders of these locomotives are 22 in. by 30 in. and the piston valves are 12 in. in diameter. Both the cylinders and valve chambers are fitted with cast-iron bushings. The piston heads are of the Z-type, cast steel, with Hunt-Spiller bronze-lipped rings. The piston rods are of carbon steel and the Dean type crossheads are nickel-steel castings with forged-steel shoes lined with Durite metal. The guides are forged steel with the Alco Slidguide attachment to the back cylinder heads. Both the pistons and the valve stems operate in King type packing. The valves are actuated by Walschaert gear, controlled by an air-operated screw reverse gear of Canadian Pacific design.

The main and side rods are forged from high-tensile nickel steel and are of the I-section design. The main crank pins operate in floating bushings running in nickel-cast-iron bushings in both the main and side rods.

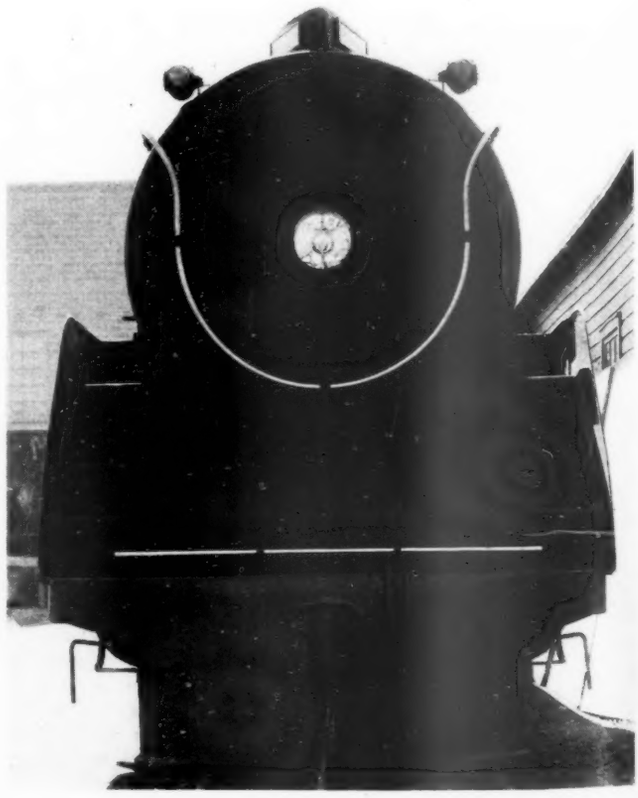
The lubrication of the moving and wearing parts is provided for by both forced-feed oil and grease systems. Alemite is used on the motion work (except in the link block), main driving boxes, brake and spring rigging. Pressure grease lubrication is also used on the main and side rods and the back end of the eccentric rods. Mechanical oiling by means of a Nathan DV-4 eight-feed lubricator takes care of the cylinders, valves, water pumps, air pumps, guides, and stoker engine. Four-way dividers are used on the guides.

The air-brake equipment is the Westinghouse Schedule No. 8 ET with an 8½-in. cross-compound compressor mounted on a bracket attached to the bed on the right side of the locomotive. The feedwater-heater pump is mounted on a similar bracket under the runboards on the opposite side.

A feature of these locomotives is a recent design of vestibule-type cab in which the exterior walls are built of copper-bearing-steel plate and the interior walls and roof of No. 18- and 20-gage copper-bearing-steel sheet. Johns-Manville 1-in. insulation is used between the inner and outer walls. The flooring is of 2-in. white pine.

The Tenders

The tenders are of the rectangular type with General Steel Castings Corporation cast-steel water-bottom un-



The Pilot and Front-End Shrouding Are of Plate Construction

derframes and riveted tank construction. The tanks are of copper-bearing steel and have a capacity of 12,000 Imperial gallons (14,400 U. S. gal.) The coal capacity is 21 tons. The tender trucks are of the six-wheel type furnished by General Steel Castings Corporation and are equipped with clasp brakes operated by 10-in. by 14-in. brake cylinders. Barco flexible connections are used on the steam heat and stoker lines between the engine and tender and on the steam-heat line at the rear of the tender. Franklin Type E radial buffers are used between engine and tender.

General Dimensions and Weights of the Canadian Pacific 4-6-4 Type Locomotive

Railroad	Canadian Pacific
Builder	Montreal Locomotive Works, Ltd.
Type of locomotive	4-6-4
Road class	H1d
Road numbers	2850-2859
Date built	August, 1938
Service	Passenger
Rated tractive force engine, 85 per cent, lb.	45,250
Rated tractive force with booster, lb.	57,250
Weights in working order, lb.:	
On drivers	(a) 186,800 (b) 186,700
On front truck	(a) 61,500 (b) 60,500
On trailing truck	(a) 105,700 (b) 115,900
Total engine	(a) 354,000 (b) 363,100
Tender	289,000
Wheel bases, ft. and in.:	
Driving	13-2
Engine, total	13-2
Engine and tender, total	39-6
Driving wheels, diam. outside tires, in.	75
Cylinders, number, diam. and stroke, in.	2-22 x 30
Valve gear, type	Walschaert
Valves, piston type, size, in.	12
Maximum travel, in.	7
Boiler:	
Steam pressure, lb.	275
Diam., first ring, inside, in.	78½
Firebox length, in.	131⅛
Firebox width, in.	88⅛
Combustion chamber length, in.	27⅛
Arch tubes, number and diameter, in.	4-3½
Tubes, number and diameter, in.	58-2¼
Flues, number and diameter, in.	171-3½
Length over tube sheets, ft.-in.	18-3
Fuel	Bituminous coal
Grate area, sq. ft.	80.8
Heating surfaces, sq. ft.:	
Firebox and comb. chamber	288
Arch tubes	38
Firebox, total	326
Tubes and flues	3,465
Evaporative, total	3,791
Superheating	1,542
Com. evap. and superheat	5,333
Tender:	
Type	Rectangular
Water capacity, U. S. gal.	14,400
Fuel capacity, tons	21
Trucks	Six-wheel

(a) Without booster.
(b) With booster.

"Golden Spike Days" Honor Union Pacific

(*Continued from page 767*)

each of the theaters, and the usual Hollywood ceremonies of hundreds of searchlights and radio broadcasts by the actors and actresses featured the premiere.

The authenticity of the movie "Union Pacific" is attested by the fact that its making was attended by President Jeffers and members of his staff, as well as technical directors who were experts in railway historical data. Frank Calvin, son of the late E. E. Calvin, for many years an executive of the U. P., served as research director and spent many months in obtaining accurate and authentic information. The actual filming of the construction and other outdoor scenes took place at Iron Springs, Utah, on the Lund-Cedar City branch line of the U. P.

Three Baldwin 8-wheel American type locomotives of 70 years ago were used, two having been purchased and one rented from the Virginia & Truckee. The "J. W. Bowker," a veteran wood-burning locomotive, was borrowed from the Pacific Coast chapter of the Railroad and Locomotive Historical Society, and repainted and rechristened "General McPherson," after the first engine of the U. P. The cabooses, coaches, box and flat cars of the period were procured from the U. P. historical equipment exhibit at its Omaha shops. The track-laying scenes are completely without trick-shots. The track was actually laid, while the cameras ground, by section gangs, graders and layers who were all U. P. workmen, under the direction of C. A. Chamberlain, roadmaster for the U. P. with headquarters in Salt Lake City. More than 2,000 yd. of embankment were graded and laid with authentic 60-lb. rail on hand-hewn ties during the course of the filming. The feverish activity of rail-laying to span the continent with a band of iron provides several of the dramatic highlights of the film, while the historic ceremony of the meeting of the tracks of the Central Pacific and the U. P. at Promontory, Utah, in May, 1869, and the driving of the golden spike, is reproduced as authentically as contemporary records and photographs can make it.

The real star of the picture is not any of the characters portrayed, but the railroad itself, and the frantic race against all obstacles to carry out President Lincoln's dream of welding the Pacific Coast to the rest of the United States by means of railway tracks to insure its remaining a part of this country provides far more suspense and drama than that portrayed by the principal characters.

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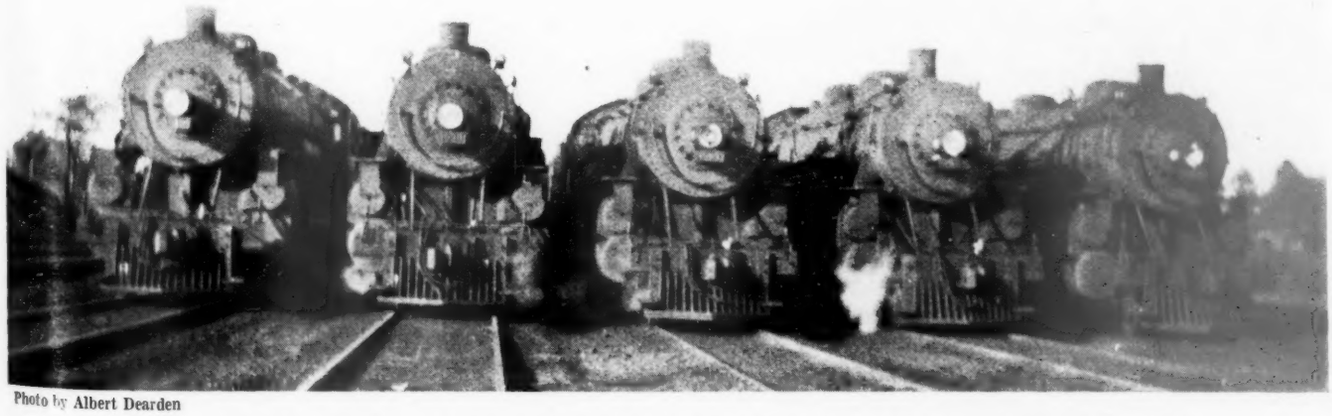

Photo by Albert Dearden

Waiting for Monday Morning. West Shore (New York Central) Suburban Locomotives Lined Up at Dumont, N. J.

Open Union Passenger Terminal at Los Angeles

(*Continued from page 778*)

and Engineering committee to construct the project, the latter committee having authority to create additional sub-committees. The Board of Managers consists of J. R. Hitchcock, general manager, Santa Fe, Coast lines (chairman); L. B. McDonald, general manager, Southern Pacific, Pacific lines; and W. H. Guild, general manager, Union Pacific, South-Central district. The original chairman of this Board was F. H. Knickerbocker, now assistant to president, Union Pacific, and a former member was A. T. Mercier, now vice president of the Southern Pacific. The Engineering committee, which has directed all of the construction work, is composed of M. C. Blanchard, chief engineer, Santa Fe, Coast lines (chairman); W. H. Kirkbride, chief engineer, Southern Pacific, Pacific lines, represented locally by J. C. E. McClure; and L. T. Jackson, representing B. H. Prater, chief engineer, Union Pacific system. Sub-committees appointed by the Engineering committee consisted of the following:

Architectural: H. L. Gilman, Santa Fe (chairman); J. H. Christie, Southern Pacific; and R. J. Wirth, Union Pacific; architects for their respective lines.

Signal and Interlocking: E. Winans, Santa Fe (chairman); R. D. Moore, Southern Pacific; and A. H. McKeen, Union Pacific; signal engineer of their respective lines.

Electrical-Mechanical: Paul Lebenbaum, electrical engineer, Southern Pacific, Pacific lines (chairman); A. B. Young, electrical engineer, Santa Fe, Coast lines; C. P. Kahler, electrical engineer, Union Pacific system; C. A. Losh, mechanical engineer, Southern Pacific, Pacific lines; and P. C. Kangieser, assistant engineer, Santa Fe, Coast lines. A former member of this sub-committee was U. S. Attix, now general fire inspector of the Southern Pacific.

Communications: A. W. Flanagan, superintendent of telegraph, Southern Pacific (chairman); T. P. Brewster, superintendent of telegraph, Santa Fe; and C. J. Steinel, assistant superintendent of telegraph, Union Pacific.

All of the actual construction work at the terminal has been under the immediate direction of A. J. Barclay, construction engineer, and S. V. Meigs, assistant construction engineer. John and Donald B. Parkinson of Los Angeles, have acted as consulting architects.

The general contractor on the terminal project was Robert E. McKee, Los Angeles. All of the structural steel was furnished by the Consolidated Steel Corporation, Ltd., Los Angeles, while the large amount of reinforcing steel involved in the work was divided between the Bethlehem Steel Company, Bethlehem, Pa.; the Blue Diamond Corporation, Los Angeles; the Ceco Steel Products Corporation, Los Angeles; and the Columbia Steel Company, San Francisco, Cal.

CONTROL OVER HIGHWAY TRANSPORT by individual provinces of the Union of South Africa is the major obstacle in consummating a recently-proposed plan for establishment of a national ministry of transport in the Union, according to press reports. The object of the ministry would be to nationalize and unify railroad, highway and air transportation of the country. Since control of highway systems constitutes one of the three principal remaining functions of the provincial governments, the latter are averse to surrendering such control. Hence, competent authorities believe that the project must be shelved for some time to come. The administration of the government-owned South African Railways & Harbors is a particularly strong advocate of the establishment of the Ministry of Transport.

New Books...

National Association of Railroad and Utilities Commissioners, Proceedings of Fiftieth Annual Convention, New Orleans, La., 1938. 719 pages. 9 in. by 6 in. Bound in cloth. Published by the State Law Reporting Company, New York. Price $6.

This book covers *in toto* the proceedings of the 50th annual convention of the national meeting of state regulatory officials held at New Orleans, La., November 15 to 18, inclusive, including speeches, reports and from-the-floor discussions. Those matters of particular interest to railroaders were summarized in an article appearing in the *Railway Age* of November 26.

Its appendices and tables, however, will comprise new material for most readers. Furthermore, the unabridged reports of discussions following scheduled speeches, in which a large proportion of the state commissioners present participated, give an extremely informative cross-section view of the opinions with respect to transportation held by the guardians of intra-state movements. Therein is to be found also a vigorous exchange of ideas and arguments among those holding varying views which may serve to suggest new ways and means of finding the way out of "the transportation problem."

Without Penalty to Capital or Labor—A Plan to Restore Prosperity, by Owen Taylor. 96 pages. 11 in. by 8½ in. Bound in paper. Published by Stock Market Publications, Inc., New York. Price $3.

This book apparently has a threefold purpose: (1) to arouse in the investor class an interest in the railroad problem both to protect capital already committed and to make possible a renewed credit market for the carriers by insuring a new era of prosperity for them; (2) to present the present-day facts of the industry to the public at large; and (3) to set forth a remedial program of governmental action. The author has published a number of popular works devoted to the more technical aspects of the "art" of investment and speculation, including a recent work entitled "The Coming Boom in America's Railroads."

The chief value of this book lies in the excellent charts which the writer has prepared to portray graphically the plight of the carriers in the decline of their traffic and revenues concurrently with the arbitrary increase of costs by factors outside their control. In addition, he presents a series of eight charts which dramatize the remarkable improvement in management efficiency between 1921 and 1937 as indicated by orthodox indices of operating performance. Actually, the book contains little new information; the facts presented are to be found in numerous publications already on library shelves. Its value lies rather in the presentation of these facts in an easily-read, brief, almost conversational manner. The discussion of railroad wages and the peculiarities of the dual basis of pay for train-service employees is especially good in its citation of numerous cases showing pay, hours and work performed on actual runs operated in various sections of the country.

Mr. Taylor's proposed solution is less satisfactory, principally because, as the title of the book indicates, he wants to make the carriers healthy without it costing anybody anything. After a fine critique of the relatively excessive wage payments to certain classes of employees, inelastic working agreements, subsidized competition, oppressive regulation, and the harassing pressure of the "put 'em through the wringer"—ers, he ignores all such factors when he comes to his final plan to put the railroads on a prosperity basis, except with reference to the easement of tax burdens.

Mr. Taylor's plan provides that the 10 per cent of the railroads' tax bill which, it is demonstrated, goes for highway costs, should be deducted henceforth; that a portion of the profit of the Post Office Department, which, he asserts, is due to the benefits of railroad handling, should be used to increase payment-rates by the Post Office to the railroads so as to cover the cost of maintaining their roadway. And from this alone, says the author, the railroads could cut their costs sufficiently to establish adequate values for their securities without the need for a wage cut, and thus "quickly and painlessly" solve the crisis facing them.

NEWS

Extra! Culkin Vetoes a Canal

Canal-Boat Frank can't see the Florida project, but House group okays it

The Senate committee on commerce last week reported without recommendation the bill (S. 1100) for the completion of construction of the Florida Ship Canal, while the House committee on rivers and harbors filed its favorable report on H. R. 3223, the similar bill which had been approved by the committee sometime previously as noted in the *Railway Age* of April 22, page 712. The House committee's report reveals that eight members oppose the construction of the project at this time, the dissenting views of seven members being set forth in one separate expression and those of Representative Culkin, Republican of New York in another: The seven joint dissenters, all Republicans, were: Representatives Seger of New Jersey, Carter of California, Dondero of Michigan, Rodgers of Pennsylvania, Williams of Delaware, Bender of Ohio and Griswold of Wisconsin.

The majority report asserted that the canal is "not only desirable for but essential to the adequate defense of the United States." It went on, after a discussion of the opposition, to set forth in conclusion that "it may be said that the opposition is not well-founded; that the project is of unusual merit; that its economic justification is beyond question; that its benefits will increase with time and will accrue to a larger proportion of our country and its population than those of almost any other federal public work; and that its construction is needful and in the public interest."

The dissenting seven asserted that the project would involve an expenditure of $200,000,000 with "a strong possibility of its reaching the enormous sum of $291,843,000 . . ." They add that the undertaking at this time of such a project, "which cannot be considered as an emergency proposal," and "which is not essential for the health, safety, or defense of the American people," would constitute "a grave national mistake" on the part of Congress. Representative Culkin, who has been something of a waterways enthusiast, agreed with his dissenting colleagues that the expenditure should not be taken on at this time; but he disagreed with their conclusions as to the feasibility and economic justification for the waterway. He believes that the canal should some day be built, but that the people can wait for the "savings" it will bring until such time as "our financial house is in order and the country is normal, both as to balanced budget and income."

Net Earnings Key to R. R. Problem

The railways' present narrow margin of net earnings is what is the matter, and all that is the matter, with them. How about capitalization and fixed charges? Between 1916 and 1938 their investment increased 8½ billion dollars, while their total net capitalization increased only 2 billion dollars and their indebtedness only 1⅓ billions—which shows, of course, that they made an investment of 6½ billion dollars from earnings which was not capitalized. The Interstate Commerce Commission held seventeen years ago they were entitled to earn an annual return of 5¾ per cent. But their *total net earnings in 1938 were not sufficient to have paid a return of 5¾ per cent upon even the 6½ billion dollars of uncapitalized investment from earnings* made since 1916—to say nothing of the trifling additional investment of 20 billions made during the last one hundred and twelve years.

Private ownership and management of railways cannot survive on the present margin of net earnings. Whatever his motive, and whether he knows it or not, every public man and every business man who opposes changes in government policies necessary to increasing the margin of railway net earnings is thereby promoting government ownership of railways and destruction of private enterprise in this country; for adoption of government ownership of railways would be the most destructive single blow that could be dealt to our entire system of private enterprise.

From an address by Samuel O. Dunn to the Chamber of Commerce, New York, on May 4

Motor Bureau Appointments

James F. Pinkney, assistant chief of the Section of Complaints, Bureau of Motor Carriers, Interstate Commerce Commission, has been promoted to chief of that section, succeeding Wilmer A. Hill who has resigned to enter private practice. Kenneth J. McAuliffe succeeds Mr. Pinkney as assistant chief.

Canada May Get Dismissal Pact

Liberal writes bill providing pay allowances similar to Washington Agreement

A bill providing payment for Canadian railroad employees displaced or demoted by reason of consolidations and pooling of services, has been introduced into the Canadian Senate by Raoul Dandurand, government leader in the Senate, as an amendment to the Canadian National-Canadian Pacific Act of 1933. Similar on the whole to the so-called "Washington Agreement" of May, 1936, effected between the carriers in the United States and union representatives, the bill is designed to protect employees dismissed or otherwise affected by "co-operative economies" directed by the Act.

Specifically the bill provides that workers displaced by reason of operating changes will receive as compensation for the loss of employment a monthly allowance of 60 per cent of the average monthly compensation received during the 12 months immediately preceding the effective date of the measure which deprives them of employment, the period of payment to extend from six to 60 months, based on length of service. Employees continued in service but demoted as a result of co-operative measures, would be granted a monthly income for five years equal to the average monthly income received during the last 12 months of employment prior to the co-ordination measure.

The Canadian bill differs from the Washington Agreement in the following respects:

(1) The Washington Agreement is a contract which is to run for five years from June 18, 1936, and provides that any party may withdraw from the agreement on one year's notice; as a contract it is binding only on the parties thereto. The Canadian measure is a legislative act and if enacted, may be revised or varied only by Parliament and is binding on all persons within the jurisdiction of Parliament.

(2) The Washington Agreement contemplates voluntary co-ordination. The Canadian bill provides for "co-operative" measures, plans or arrangements agreed to by the two carriers or drawn up by order of an arbitral tribunal under the Canadian National-Canadian Pacific Act.

(3) Whereas the Washington Agreement provides that all employees be given 90 days' notice of any co-ordination meas-

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T. V. A. Hollering At Rates Again

Emits another squawk at alleged rail discrimination against Southern producers

President Roosevelt on April 27 transmitted to Congress a Tennessee Valley Authority survey entitled "Supplemental Phases of the Interterritorial Freight Rate Problem of the United States," which elaborates on T. V. A.'s previously-told tale of alleged freight-rate discriminations against the South and West. The previous report, authorized by Interstate Commerce Commissioner J. Haden Alldredge in his former role as T. V. A. transportation economist, was submitted to Congress on June 7, 1937, as noted in the *Railway Age* of June 12, 1937, page 988.

Since that time Mr. Alldredge had been promoted to director of T. V. A.'s Commerce Department, the position he held when President Roosevelt recently appointed him to succeed Commissioner Frank McManamy on the I. C. C. The supplemental report came out of the Transportation and Industrial Division of this T. V. A. Commerce Department; and Mr. Alldredge wrote its foreword, although his name is not included on the list of contributors to the study itself. Also, there was a letter in which T. V. A. Chairman Harcourt A. Morgan highlighted the supplemental survey for the President.

As Chairman Morgan recalled it the initial report "revealed that shippers of manufactured and semi-finished goods in the southern and western areas of the United States were subject to substantially higher freight rates than shippers within Official territory. . . . " The supplemental report, he went on, reveals "two additional facts that should be carefully noted in current consideration of this problem." They are:

1. Shippers in southern and western portions of the United States must pay transportation charges, in order to market their processed goods in the rich consuming area in the East, which are higher, mile for mile, than those rates available to shippers in Eastern Canada. The volume of manufactures from industrial areas in Eastern Canada which move into the Official Territory, coupled with the relatively low level of freight rates for these movements, are indicative of the marketing opportunity now in possession of these industrial centers in Eastern Canada which is not enjoyed in the same degree by the outlying territories of the United States. It would seem that the contiguous territories of the United States south and west of the Official Territory at least should enjoy the same opportunity insofar as transportation charges are concerned as is granted by the carriers to producers in the adjacent territory of Eastern Canada.

2. The recent revision upward of freight rates on a uniform percentage basis, provided for in *Ex Parte No. 123*, 226 I. C. C. 41 (1937-1938), has accentuated the discrimination resultant from the maintenance of regional freight rates. The increase on any given rate of an assumed percentage is necessarily greater in terms of dollars and cents than the same percentage increase on a lower rate. This current development in our national freight rate structure increases the importance of an early consideration of the effect of the maintenance of regional freight rate structures on our national economy.

After presenting arguments which made it clear to him "that the present regional rate discrimination stands athwart our optimum national economic development," Chairman Morgan told the President what in his opinion Congress might do about the matter. "The power of adjusting this regional freight rate structure," he said, "is clearly held by the Congress of the United States. Already legislation prohibiting discrimination between persons, corporations, and localities is the law of the land, enforced by the Interstate Commerce Commission. A simple technique of adjustment is available. In the past Congress has exercised its power by establishing the national policies of common carrier regulation and laying down the general rules by which such regulation is to be accomplished, leaving the administrative task, involving the mechanics of rate-making, to the regulatory agency. The regional discrimination pointed out in the reports may be corrected by application of this traditional system of regulation. It is enough for Congress to prohibit discrimination between regions and territories, and adopt a policy that its regulatory agency will follow in molding a national rate structure avoiding this discrimination."

I. C. Employees Submit Suggestions

A total of 2,610 suggestions were submitted by employees of the Illinois Central under its Employees Suggestion Plan during the period from March 6, when the plan was started, to April 15. Of those on which final action has been taken to date, 45 were adopted while awards amount to $432. Three of the awards were for $50 each in recognition of the monetary value of the suggestions for which they were paid.

Under the plan, employees are encouraged to make suggestions and are rewarded for those which will save money or improve railroad operation. Employees submit suggestions unsigned on numbered cards, retaining a stub with the same number. Weekly bulletins are posted acknowledging suggestions by number and the winners present their stubs to receive the award, which is based upon the value of the suggestion. The suggestions are considered by a general suggestion committee consisting of a representative of the organized employees, and representatives of all major departments.

Erie to Have Morning Chicago-New York Train

The Erie on June 3 will extend the service of its Lake City Express from Cleveland, Ohio to Chicago, and rename the train the Midlander. The train will leave Chicago at 9:05 a. m. and will arrive in New York at 7:40 a. m. Eastern time, while returning it will leave New York at 8 p. m. and arrive in Chicago at 5:20 p. m. With the extension of the service, the Erie will have a train departing from Chicago in the morning, in addition to those leaving in the evening.

I. C. C. Authorizes Foreclosure Sales

Decides to permit bondholders to bid in their property at a fair "upset" price

Reversing its position in other proposed and final reports in railroad reorganization cases to the effect that it would not include in a plan of reorganization a provision for the sale of the property at an upset price, the Interstate Commerce Commission, on May 2, handed down a revised final plan for the Spokane International which includes a foreclosure sale as one of the features of the reorganization procedure. By this action, the commission recognizes a right which the bondholders' committees have been continually asking for, that they should have the privilege of buying in the property at a foreclosure sale if the creditors are unable to agree on an allocation of the new securities of the reorganized company.

Although the commission has not said as much in so many words, yet by its failure to include such a feature in its previous final plans, bondholders have been led to believe that the commission did not think it had authority to include such a provision in its plans. Seemingly now it has been convinced that the enactment of section 77 of the Bankruptcy Act does not preclude the bondholder from what he has contended is his right to purchase the property at a foreclosure sale at a fair upset price.

It is thought that by the recognition of this principle by the commission, action on pending reorganization cases may be accelerated because of the fact that, now, unsecured creditors and stockholders whose equity or interest has been found by the commission to have no value will be precluded from instituting suits against the reorganized company. The commission report points out that purpose of the sale provision, as stated by the bondholders, is to secure the reorganized company property which will be more nearly immune from attack by nonassenting classes of creditors upon possible grounds of unconstitutionality of the provisions in section 77 permitting confirmation of a plan of reorganization other than according to principles applicable to compositions.

The commission approved the following plan for sale at an upset price:

"If so ordered by the court, the plan may be executed by the sale or sales, at not less than fair upset prices to be fixed by the court, of all or any part of the property of the debtor and the intervening debtor, all on such conditions and in such manner as the court may direct. Upon any such sale or sales, the property and assets offered for sale may be purchased for the benefit of the new company by the reorganization managers, and in that event there shall be applied on account of the purchase price the distributive share of the proceeds of such sale of all securities the holders of which shall have assented to the plan, and of the securities, though

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3 Months N. O. I. Was $85,808,342

1.78 per cent return compares with $19,963,178 or 0.41 per cent last year

Class I railroads in the first three months of 1939 had a net railway operating income of $85,808,342 which was at the annual rate of return of 1.78 per cent on their property investment, according to the Bureau of Railway Economics of the Association of American Railroads. In the first three months of 1938, their net was $19,963,178 or 0.41 per cent, and in the first three months of 1930, it was $173,060,112 or 3.48 per cent.

The March net railway operating income of the Class I roads was $34,316,888 or 1.72 per cent on investment compared with $14,728,275 or 0.74 per cent in March, 1938, and $60,046,885 or 3.02 per cent in March, 1930.

Gross operating revenues for the first three months totaled $897,774,120 compared with $813,163,372 for the same period in 1938, and $1,316,100,042 for the same period in 1930, an increase of 10.4 per cent in 1939 above 1938, but 31.8 per cent below 1930. Operating expenses for the three months amounted to $693,925,162 compared with $676,923,373 for the same period in 1938, and $1,026,147,037 for the same period in 1930—2.5 per cent above the former, but 32.4 per cent below 1930.

Class I roads in three months paid $86,240,716 in taxes compared with $84,244,272 in the same period in 1938, and $86,757,597 in the same period in 1930. For March alone, the tax bill amounted to $29,470,939, an increase of $1,092,675 or 3.9 per cent above March, 1938. Thirty-five Class I roads failed to earn expenses and taxes in the first three months of 1939, of which 10 were in the Eastern district, five in the Southern district and 20 in the Western district.

Gross for March amounted to $315,091,018 compared with $283,017,974 in March, 1938, and $447,314,318 in March, 1930; operating expenses totaled $240,358,781 compared with $229,004,115 in the same month in 1938, and $347,107,974 in March, 1930.

Class I roads in the Eastern district for the first three months had a net railway operating income of $58,343,285, which was at the annual rate of return of 2.27 per cent; for the same period of 1938, their net was $15,807,557 or 0.62 per cent, while in 1930 it was $97,348,395 or 4.22 per cent. Gross in the Eastern district for the three months totaled $450,750,031, an increase of 16 per cent compared with 1938, but a decrease of 32 per cent compared with 1930; operating expenses totaled $334,908,019, an increase of 5.4 per cent above the same period in 1938, but a decrease of 34.5 per cent under the first three months of 1930.

The Eastern district net for March was $21,532,482 compared with $8,702,977 in March, 1938, and $32,182,039 in March, 1930.

The three months net in the Southern district was $18,179,714, or 2.21 per cent; for the same period in 1938, it amounted to $11,039,118 or 1.33 per cent, and for the same period in 1930 it was $24,914,286 or 2.85 per cent. Gross in the Southern district for the first three months amounted to $127,814,297, an increase of 7.8 per cent compared with the same period in 1938, but a decrease of 28.3 per cent under the same period in 1930; operating expenses totaled $94,818,983, an increase of 2.1 per cent above the same period in 1938, but a decrease of 31.7 per cent under 1930. The March net in the Southern district was $7,278,425 compared with $5,111,647 in March, 1938, and $9,262,673 in March, 1930.

Class I roads in the Western district for the three months had a net of $9,285,-

(*Continued on page 796*)

L. & N. To Extend One-Cent Fares

The one cent per mile passenger rates which the Louisville & Nashville has had in effect between Owensboro, Ky., and Russellville from September, 1938, to March 31, 1939, as an experiment, will be extended for three months. At the same time, the experiment will be extended to the Columbia, Tenn.—Sheffield, Miss., and Georgiana, Ala.—Graceville, Fla., branches. The one cent coach rate is good on the day sold and one day in addition. The round-trip fare is also at the rate of one cent a mile but its limit is fifteen days. The extension and expansion of the experiment is the result of the success experienced on the 72-mile line between Owensboro and Russellville where bus competition is keen.

CLASS I RAILROADS—UNITED STATES

	1939	1938	1930
Month of March			
Total operating revenues	$315,091,018	$283,017,974	$447,314,318
Total operating expenses	240,358,781	229,004,115	347,107,974
Taxes	29,470,939	28,378,264	29,578,207
Net railway operating income	34,316,888	14,728,275	60,046,885
Operating ratio—per cent	76.28	80.92	77.60
Rate of return on property investment	1.72	0.74	3.02
Three Months Ended March 31			
Total operating revenues	$897,774,120	$813,163,372	$1,316,100,042
Total operating expenses	693,925,162	676,923,373	1,026,147,037
Taxes	86,240,716	84,244,272	86,757,597
Net railway operating income	85,808,342	19,963,178	173,060,112
Operating ratio—per cent	77.29	83.25	77.97
Rate of return on property investment	1.78	0.41	3.48

U.S. C. of C. Hears Talks on Transport

Holds round-table conference at its annual meeting in Washington

The twenty-seventh annual meeting of the Chamber of Commerce of the United States, held this week in Washington, D. C., included a round-table conference on "Urgent Transportation Needs" with discussions of that subject from the standpoints of the railroads, the shipper, the investor, motor carriers and water carriers. Spokesmen for these interests, respectively, were: R. V. Fletcher, vice-president and general counsel of the Association of American Railroads; W. H. Day, chairman of the executive committee of the National Industrial Traffic League; Leslie Craven, special counsel for the Railroad Security Owners Association; H. D. Horton, president of the Horton Motor Lines, Inc., Charlotte, N. C., and Frank J. Taylor, president of the American Merchant Marine Institute.

Presiding was Arthur M. Hill, president of the Atlantic Greyhound Corporation, who was later in the week re-elected to the Chamber's board of directors as one of the two representatives of transportation and communication, the other such representative being George D. Brooke, president of the Chesapeake & Ohio, who is serving out the unexpired term of the late president of the Atchison, Topeka & Santa Fe—Samuel T. Bledsoe. Before getting down to the business of the day, those attending the round-table conference, at the suggestion of Mr. Hill, arose in tribute to the memory of Mr. Bledsoe and his work with the Chamber. Also, preliminary to the discussions, was the highlight presentation by David H. Howie, vice-president of the Fiduciary Trust Company, Boston, Mass., of the program for transport legislation brought forth by the Chamber-sponsored Transportation Conference. Later those attending the round-table conference approved a resolution endorsing the work of the Transportation Conference, the resolution having been prepared for presentation to the round-table at the previous day's meeting of the Chamber's Transportation and Communication Department Committee.

Howie Discusses Recommendations of Transportation Conference

Meanwhile Mr. Howie had explained how the Transportation Conference had been organized and functioned, adding that he was "frank to recognize that the first reading of the recommendations may cause disappointment to some because they do not appear to furnish a sufficiently comprehensive railroad program." He hopes, however, that on further reflection "any feeling of disappointment will disappear;" for, as he sees it, "the two objectives, immediate relief and a long term program, are at the moment not compatible."

"There are men here," Mr. Howie went

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Walter Doubtful on R.R. Legislation

Sees no immediate increase in net earnings through pending legislation

Doubtful whether Congress would pass legislation to help the railroads this year and equally doubtful whether such legislation, even if passed, would have any immediate effect on their net earnings, Luther M. Walter, co-trustee of the Chicago Great Western, member of counsel for the National Industrial Traffic League and a former member of the Interstate Commerce Commission staff, advocated or rejected in turn the chief features of legislation now before both houses and added a few proposals of his own in a luncheon address before the Traffic Club of New York on May 2. The speaker felt that Congress would pass some railroad legislation if it remained in session long enough, but believed that a June adjournment would probably end the possibility of legislative aid for this year. None of the legislation now under consideration would add materially to the carriers' revenues in their present crisis, anyway, he added.

Under the title "Some Needed Legislation by Congress Dealing with the Railway Situation," the speaker opposed in particular the Wheeler-Truman bill to establish a special railroad reorganization court, adding that he believed the House Lea committee to be opposed to the measure. He asserted that a provision to base future capitalization upon a six-year "statutory yardstick" would accrue only to organized labor at the expense of junior security holders, citing, in this connection, the strong support of Labor-spokesman George Harrison for the measure. He hoped to see the day when men in public office would become honest enough to cease "taking one man's property and giving it to another for the sake of votes."

Mr. Walter strongly advocated changes in the Railway Labor Act which would compel adjustment boards to keep records of hearings, swear in witnesses and "perform the things which the Supreme Court says is necessary to render a valid decision;" permit losing parties on either side in adjustment board cases to appeal to the courts and establish a supply of permanent public referees for use in instances of deadlock between carrier and employee conferees. Here he expressed the opinion that the present "piece-work" method of employing outside referees tends toward decisions in favor of the side whose influence will bring about the continued employment of the referee.

B. & O. Makes Schedule Changes

The Baltimore & Ohio, in connection with schedule changes effective April 30, cut 51 minutes from the running schedule of its National Limited eastbound between St. Louis, Mo., and New York. The train will continue to leave St. Louis at 9:30 a. m., but will arrive in Jersey City, N. J., at 12:26 p. m., instead of at 1:17 p. m. the next day. At the same time the eastbound Diplomat was scheduled to make its run from St. Louis to New York 15 minutes faster.

The road extended its "West Virginian," now running between Jersey City, N. J., and Parkersburg, W. Va., to Cincinnati, Ohio. The train will leave Jersey City at 7:42 p. m., instead of 6 p. m., and will arrive at Washington, D. C., at 12:32 a. m., instead of 11:00 p. m. The road will inaugurate sleeping car service daily in both directions between New York and New Orleans via Louisville, Ky., where connections will be made with the Illinois Central.

All About the Railroads at New York World's Fair

The following are the articles which *Railway Age* has scheduled to publish about the railroad part of New York's World's Fair, with prospective dates of publication:

To appear in Issue of

May 13—Long Island Railroad World's Fair Station.

May 20—"Railroads in Building"—The exhibit of the railway equipment and supply industry.

May 27—"Railroads at Work"—Enormous scenic diorama with trains in operation.

June 3—The Railroad Track Exhibit.

June 10—"Railroads on Parade"—Pageant depicting history of American transport.

June 17—Railway Exhibits Elsewhere in the Fair.

June 24—Steam Locomotive of Tomorrow — Operating on a roller bed, exhibited by Eastern Railroads.

Club Meeting

The Traffic Club of Newark, N. J., will hold its next forum on May 8 at the Essex House, Newark. Fred Carpi, general freight agent, Pennsylvania, will discuss "The Merchandise Traffic Problem." The club will hold its annual dinner dance on May 11.

Equipment Depreciation Orders

Equipment depreciation rates for eight railroads are prescribed by the Interstate Commerce Commission in a new series of sub-orders and modifications of previous sub-orders in No. 15,100, Depreciation Charges of Steam Railroad Companies. The composite percentages for all equipment, which are derived from the individual prescribed rates, range from 2.43 per cent for the Lawndale Railway & Industrial Company to 6.91 per cent for the Missouri & Arkansas.

Other roads on the list are: Chicago & Illinois Midland; Houston & Brazos Valley; Manitou & Pike's Peak; Midland Continental; Pittsburgh, Allegheny & McKees Rocks; and Warrior River Terminal Company.

Rail Bills Put on "Duty" List

Senate majority leader says they should be enacted at this session

Enactment of transportation legislation was listed by Senate Majority Leader Barkley among Congressional duties which should not be shirked when he spoke in the Senate on May 2 with reference to the concurrent resolution introduced on that day by Senator Bankhead, Democrat of Alabama, calling for a sine die adjournment of the present session not later than June 15. Meanwhile in the course of the discussion on the Bankhead resolution, Chairman Wheeler of the Senate committee on interstate commerce told Mr. Barkley that the sub-committee working on S. 2009 hoped to have this Wheeler-Truman "key bill" in shape for reporting "by the latter part of this week or the first of next week."

Also, Senator Wheeler was confident that the measure as reported "will be as nearly satisfactory as it is possible to make any such legislation. "It was understood that copy for a sub-committee print of S. 2009, thus revamped, went to the printer on Thursday. No definite information had come from the House committee on interstate and foreign commerce when this issue went to press; but it was stated that the sub-committee to which the transport bills are assigned was still holding executive sessions. In a radio address on last Monday evening Senator Wheeler discussed S. 2009 and S. 1869, on which public hearings are now being held as noted elsewhere in this issue. With respect to the former measure the Senator told his radio audience that the sub-committee in executive session "has overcome whatever meritorious objections have been raised by interested parties during the hearings." He went on to predict that this "key bill" as it emerges from the committee "will be a constructive and modern piece of regulatory legislation,"

Would Have Committee Carry On

The above-mentioned Bankhead adjournment resolution provided that the Senate committee on interstate commerce and the House committee on interstate and foreign commerce, together with their subcommittees, "shall, after the adjournment of the present session of the Congress, make a study and investigation with a view to determining what changes, if any, should be made in the Interstate Commerce Act, and shall at the beginning of the next session of Congress, make a report by bill or otherwise of their recommendations." In discussing his resolution Senator Bankhead cited conditions which made it apparent to him that "in all likelihood the business of this session will be drawn out certainly into July, and probably into the month of August." The subsequent references to railroad legislation came amidst discussions of neutrality and tax legislation and protests from senators who wanted Congress to remain in session lest the

United States be drawn into a European war.

After asserting that, despite earlier hopes, he was now confident that Congress could not adjourn by June 15 "without running away from the performance of our public duty," Majority Leader Barkley went on to discuss the Bankhead resolution's reference to the committee on interstate commerce. This committee, he said, "for the last two or three years has been devoting itself assiduously and single-mindedly toward the gathering of information which might help in the solution of the acute railroad problem which confronts the railroads and the country with respect to our transportation systems. Bills to that end have been introduced in this session. The President appointed a joint committee made up of three representatives of railway labor and three representatives of management to work out a suggested measure. Bills have been introduced, and a sub-committee of the committee on interstate commerce is now working on the problem of revising the bills so as to bring them to the floor of the Senate within the next week or 10 days. It is my earnest hope that that task may be accomplished. A similar House committee is considering the problem."

Wheeler Promises Early Reports

Here came Senator Wheeler's above-mentioned comment on S. 2009 and its status before the sub-committee; and he went on to say that the committee would "probably" be able to report S. 1869, dealing with railroad reorganization procedure, "by the latter part of next week."

Resuming, Senator Barkley ventured to suggest that "in view of the hearings that have been held and the consideration that has been given to that subject not only by the committee on interstate commerce but by the executive branch of the government and by the parties in interest, the railroads themselves, and all those connected with them, including management and labor relationships, there is now available practically all the information that could be obtained if the committee were to hold hearings the remainder of the summer on the subject of railway legislation."

"So," the majority leader went on, "there has been no negligence, no shirking of any duty on the part of the committee, in trying to work out a very intricate and very difficult problem and in trying to find out what to do about the railroad situation in the United States. I dare say that, with all the care that has been given the subject, and all the care that has been given to the drafting of legislation, when we shall have brought it onto the floor and passed it, we can still say that nobody has the last word in the solution of the railway problem."

No Need for Further Investigation

After a bit of by-play from Senator Norris, Republican of Nebraska, who made the point that the resolution being discussed was not officially before the Senate, Mr. Barkley expressed the belief that the committees would be no nearer to a solution of the railroad problem next January "when Congress comes back and starts over again, as it always does at the beginning of a Congress, on a cold collar, back down the hill, and then start fresh to reach the point where we are now." "So," he added, "I do not think that anything can be accomplished by deferring for further investigation the railroad problem that is now before the committee on interstate commerce."

In his above-mentioned radio address Senator Wheeler spoke of "special groups seeking to preserve and protect their selfish interests," which "are inspiring a propaganda campaign against these bills, including the one which codifies and modernizes the present Interstate Commerce Act by placing all competitive carriers on a basis of equality in regulation." He went on to point out how Congress has encouraged and "appropriated millions of dollars" for "fine highways which the trucks can and do use;" and how it has "aided water carriers with huge appropriations . . . for the purpose of dredging harbors, canalizing rivers and otherwise encouraging water transportation with public funds." And while he thinks Congress has wisely rejected requests that the railroads be subsidized, he nevertheless asserted that the rail carriers should not be made to suffer any discrimination.

Says S. 2009 Will Bring "Equitable Regulation"

"The transportation bill which Senator Truman and I have introduced and which we hope the Senate committee on interstate commerce will recommend for passage this week," he continued, "is neither drastic nor radical. It is designed to modernize, codify and clarify the present regulatory act by extending regulation by the same and single agency to all competitive forms of transportation, but with recognition to the inherent advantages of each, and with due consideration to the public interest. This will give to the carriers co-ordinated and equitable regulation and it will insure the public of coordinated transportation service. . . .

"Water carriers have appeared before the Senate committee in opposition to the enactment of the bill. They fight it because they do not want regulation. They say there is no public demand. There is a demand—a demand for a national transportation policy—and even-handed justice for all—regardless of whether they be small or great, and this bill seeks to do that. The opposition the Congress and the nation will presently hear is based on fear and misapprehension—not on facts."

Later in the address, in the course of his discussion of S. 1869, Senator Wheeler cited as "one of the most discouraging facts of the present time" the "hysterical fear that is blocking progress." "Fear seems to be the governing factor in our lives," he added. "There can be no hope of progress on that basis. Nor can we legislate for the public good if fear continues to be the guiding policy of those who appear before committees of Congress to oppose legislation which we have under consideration. At this very moment an effort is being made to block constructive railroad legislation with a lobby of fear."

Oral Argument on Substituted Freight Service June 7

The Interstate Commerce Commission has assigned its Ex Parte 129 investigation of substituted freight service for oral argument at Washington, D. C., on June 7. Examiner Burton Fuller's proposed report in this proceeding was reviewed briefly in the *Railway Age* of April 1, page 584.

No A. A. R. Appeal in Automatic Stoker Case

The Association of American Railroads will not enter an appeal on behalf of the railroads from the recent decision of a three-judge federal court at Cleveland, Ohio, upholding the Interstate Commerce Commission's order in the automatic stoker case. This decision of the A. A. R. became known following April 28's Washington, D. C., meeting of the Association's board of directors.

N. Y. Railroad Club to Meet May 19

The New York Railroad Club will hold its next meeting on May 19 in the Engineering Societies building, 33 West 39 street, New York. The program consists of a talking motion picture showing the newest creations of the E. I. duPont de Nemours & Co, with narration by Lowell Thomas; singing by the Hyatt Glee Club of the Hyatt Bearing division, General Motors Corporation; and Zufall, "America's mental magician."

Budd to Get Franklin Institute Medal

Ralph Budd, president of the Chicago, Burlington & Quincy, will receive the George R. Henderson medal given by the Franklin Institute of Philadelphia, Pa., for distinguished contributions in railway engineering when presentation of the Institute's awards for scientific invention and discovery is made to 15 American and one British scientist May 17. The awards are made annually.

Chicago Passenger Sales Meeting May 8

The fourth annual "get-together" sales meeting of railroad passenger representatives in Chicago will be held in the Grand ballroom of the Hotel Sherman on May 8. An attendance in excess of 1,000 is expected. C. Wayland Brooks will be the principal speaker of the evening, while other features will have as their purpose, the education of railroad representatives to assist them in the promotion of the sale of railroad tickets.

Col. Young Urges Letting Employees in on the Business

Asserting that an employee "should know that the successful existence of a railroad company depends upon making more money than it spends," Colonel C. D. Young, vice-president, real estate, purchasing and insurance, Pennsylvania, emphasized the need of employees and management uniting in the face of present-day attacks on the railroad business, in a speech delivered before the Chicago General Of-

fice association of Pennsylvania officers and employees in Chicago on April 27. "There is no situation that will unite the employer and the employee like an attack from outside the industry, and the railroads for the last few years have been much in that position," Mr. Young said. "The supervision of methods, the control of rates and the assessing of taxes by governmental agencies, and the competition of other forms of transportation have constituted an attack which the employees have recognized and I believe are meeting in a constructive and determined way."

A. A. R. Directors Approve Increase in Publicity-Advertising Budget

Directors of the Association of American Railroads, meeting in Washington, D. C., on April 28, voted to recommend to member roads the continuation of the present public relations and advertising program, conducted under A. A. R. auspices. Also, the board decided to recommend that next year's allotment of funds for that work be $670,000, an increase of $20,000.

The board also heard A. A. R. Vice-President and General Counsel R. V. Fletcher report on the legislative situation, in which connection it became known that the railroads are still negotiating with the National Industrial Traffic League in the endeavor to agree on language for a new rate-making rule.

Pullman Gives Annual Statement to Employees

For the second time, Pullman, Inc., has published for its employees a specially prepared statement of the operations of the Pullman group of companies. In easily understandable terms, the statement outlines the conditions directly affecting employment, wages, dividends and other important factors that depend primarily upon the demand for Pullman service and products. By means of pictures, the pamphlet shows where Pullman revenues come from and where they went. In addition, a simplified balance sheet, with illustrations, accounts for its $254,764,132 of assets and liabilities. Employee relations are also given consideration, emphasis being placed on group insurance, pensions, medical service, safety, credit unions and hospital care.

C. B. & Q. "General Pershing"—A Correction

Decelostats are installed on the axles of each truck, except the power truck and not on each axle of the power trucks as stated in the caption for the illustration at the top of page 730 of the April 29 issue of the *Railway Age*.

The side bearings referred to in the list of materials and equipment on page 734 as having been supplied by the Standard Equipment Co., Cleveland, Ohio, were furnished by Standard Equipments, Chicago.

Forwarding Order Postponed; Acme Case Reopening Denied

The Interstate Commerce Commission has postponed the effective date of its order in the Freight Forwarding Investigation from May 17 to July 17. Meanwhile the commission, by another order, has denied petitions for a reopening with a broadening of the issues of the case involving the status of Acme Fast Freight, Inc.

The latter order also directs Acme and motor carriers participating in its rates to show cause on or before June 1 why the commission should not strike from its files certain tariffs filed by Acme to name "what purport to be joint rates" between it and numerous motor carriers. The commission's action in this connection is based upon the respective findings in the Acme case and in the Freight Forwarding Investigation—that Acme is not a motor carrier or broker subject to the Motor Carrier Act, and that forwarding companies are not express companies subject to Part I of the Interstate Commerce Act.

The Canadian Roads in March

Gross operating revenues of the Canadian National in March totaled $14,632,661, an increase of $21,032 as compared with March, 1938. Operating expenses were $15,027,060, a decrease of $458,249 as compared with the $15,485,309 in the same month a year ago. This left a net revenue deficit of $394,399, being an improvement of $479,281 over the $873,680 deficit reported for March, 1938.

For the three months' period ended March 31, operating revenues were $41,197,441, against $41,222,982 in the corresponding period of last year. Operating expenses were $43,487,378, compared with $44,954,635 for the similar period of 1938.

Net operating revenues of the Canadian Pacific in March showed an increase of $406,902 compared with last year. Gross for the month was down $17,134, but operating expenses were cut $424,037 to bring about the better showing in net.

Charges for Protective Service Against Cold

The Interstate Commerce Commission has notified shippers of perishable freight that the railroads will be ready in June to proceed to a hearing in the No. 20769 investigation of charges applicable under section 5 of the Perishable Protective Tariff to the protection against cold of perishable freight from and to all points in the country.

The notice states that the carriers have about completed a study which was undertaken by them for the purpose of producing information and cost data; while the commission also has made certain studies of the cost of furnishing this service. An initial hearing will be held during the latter part of June, or as soon thereafter as practicable, at a convenient central place, at which time the carriers will present their evidence in chief, and the commission will present the data which have been prepared by it. Any other party in interest who may wish to present evidence at that time may do so. Upon the receipt of this evidence an adjournment will be taken for the purpose of affording time for analysis of the data which shall have been presented and for the preparation of such rebuttal evidence as the parties may consider desirable. It will be the purpose to press the proceeding to a conclusion in the shortest practicable time.

"All persons," the notice adds, "who ship commodities which may at any time require protective service against cold under provisions of the Perishable Protective Tariff should take notice that this investigation embraces all existing rules and charges pertaining to such service under the provisions of said tariff, and that all such rules and charges will be subject to change. Parties who are interested in maintaining the present rules and charges, as well as parties who seek changes, should arrange to be represented."

U. S. Supreme Court Orders

The United States Supreme Court, at its May 1 meeting, affirmed the District Court of the United States for the Southern District of Mississippi in its dismissal of a petition brought to set aside an order of the Interstate Commerce Commission requiring the Mississippi Railroad Commission to increase rates on intrastate freight shipments of sand, gravel, and fertilizer and its products to the level of interstate rates, in order to remove discrimination against interstate commerce. The case was an outgrowth of the commission's decision in Ex Parte 123.

In another case of the Texas Electric Railway Company v. Eastus, the Court noted probable jurisdiction of the appeal of the Texas Electric from a decree entered by the United States District Court for the Northern District of Texas which had sustained the determination by the commission that the Texas Electric is not a street, suburban or interurban electric railway, and is, therefore, not exempt from the Railway Labor Act, the Carriers Taxing Act of 1937 and the Railroad Retirement Act of 1937.

In another case of the City of Atlanta v. National Bituminous Coal Commission, et al., the Court noted probable jurisdiction of the appeal of the City of Atlanta from the action of the District Court of the United States for the District of Columbia which dismissed a suit to enjoin the Coal Commission from promulgating orders fixing minimum prices for the sale of bituminous coal. The lower court had held that the price-fixing provisions of the Act were constitutional.

P. R. R. Derailment Kills Five

Five men were killed and two seriously injured when the two locomotives of a Pennsylvania freight train were put on the ground by derails near Kenny yards in the vicinity of Pittsburgh, Pa., at 2:35 a. m., April 30. The double-headed, 36-car freight train, made up at Pitcairn yard and destined for Columbus, Ohio, had filled out at Kenny yard, and was proceeding onto the main tracks at about 30 m.p.h. when the two locomotives went through an open derail placed near the junction of the yard exit track with the No. 1 westbound main, piling up in a ditch separating the P. R. R. main from the parallel Union railroad tracks.

The firemen and enginemen of both locomotives and the conductor, who was riding the head end, were killed. One of the head brakemen jumped before the pile-

up and was slightly injured, while the other suffered fractured ribs. Two trespassers riding the first freight car were also injured. Only the first two cars left the rails.

No reason is assigned for the error of the leading engineer in passing the open derail. Investigation immediately after the accident showed that the signal indicating the end of the siding was burning and plainly visible.

P. & S. Division Study Public Relations

Steps are being taken by the Purchases and Stores division, A. A. R., to convert the purchasing and stores departments of the railroads into more effective aids in public relations work, according to a report which has been submitted to the membership by a new committee of the division. The committee takes the position that abundant opportunity exists for constructive work in public relations by employees of railway supply departments. Objectives for the division consist of efforts to convince the public that the employees believe in railway transportation and are alert to the possibilities of improving the service as fast as improvements can be developed.

Other proposals of the committee are that the executives of the purchasing and store departments should make wider distribution of the information prepared for the public by the A. A. R. and various railway publicity departments so that all employees either receive copies or have an opportunity to read the information.

Freight Car Loading

Revenue freight car loadings for the week ended April 29 totaled 586,015 cars, the Association of American Railroads announced on May 4. This was an increase of 27,309 cars, or 4.9 per cent, above the preceding week, an increase of 42,926 cars, or 7.9 per cent, above the corresponding week last year, but a decrease of 191,812 cars, or 24.7 per cent, below the comparable 1937 week.

As reported in last week's issue, the loadings for the previous week ended April 22 totaled 558,706 cars, and the summary for that week, as compiled by the Car Service Division, A. A. R., follows:

Revenue Freight Car Loadings

For Week Ended Saturday, April 22

Districts	1939	1938	1937
Eastern	131,487	111,345	167,426
Allegheny	104,251	97,756	161,229
Pocahontas	13,757	32,174	48,566
Southern	92,003	86,557	109,494
Northwestern	73,436	64,592	111,790
Central Western	99,017	88,913	104,191
Southwestern	44,755	42,411	53,552
Total Western Districts	217,208	195,916	269,533
Total All Roads	558,706	523,748	756,248
Commodities			
Grain and Grain Products	30,759	32,767	27,730
Live Stock	13,309	12,276	14,736
Coal	67,749	75,359	119,536
Coke	5,710	3,845	10,030
Forest Products	28,456	24,162	36,799
Ore	12,813	9,442	54,714
Merchandise l.c.l.	152,032	148,075	170,021
Miscellaneous	247,878	217,822	322,682
April 22	558,706	523,748	756,248
April 15	547,816	537,585	746,523
April 8	535,470	522,049	711,079
April 1	604,241	523,489	721,229
March 25	605,462	572,952	756,416
Cumulative Total, 16 Weeks	9,236,497	8,742,063	11,399,151

In Canada.—Carloadings for the week ended April 22 totaled 44,066, as compared with 41,726 for the previous week and 43,652 last year, according to the weekly statement of the Dominion Bureau of Statistics.

	Total Cars Loaded	Total Cars Rec'd from Connections
Total for Canada:		
April 22, 1939	44,066	21,888
April 15, 1939	41,726	21,169
April 8, 1939	38,995	22,589
April 23, 1938	43,652	20,124
Cumulative Totals for Canada:		
April 22, 1939	654,308	362,123
April 23, 1938	709,084	349,589
April 24, 1937	752,000	453,539

Long Island Handles 93,000 on First "Fair" Day

The Long Island handled a total of 93,000 passengers at its New York World's Fair Station in connection with the opening of the exposition on April 30. Of this total, 45,000 were carried to the fair and 48,000 homeward. Of the total using the station, the special World's Fair shuttle trains between Pennsylvania Station, New York, and the exposition grounds carried 77,000 while the remainder were handled to and from points on the island via Jamaica.

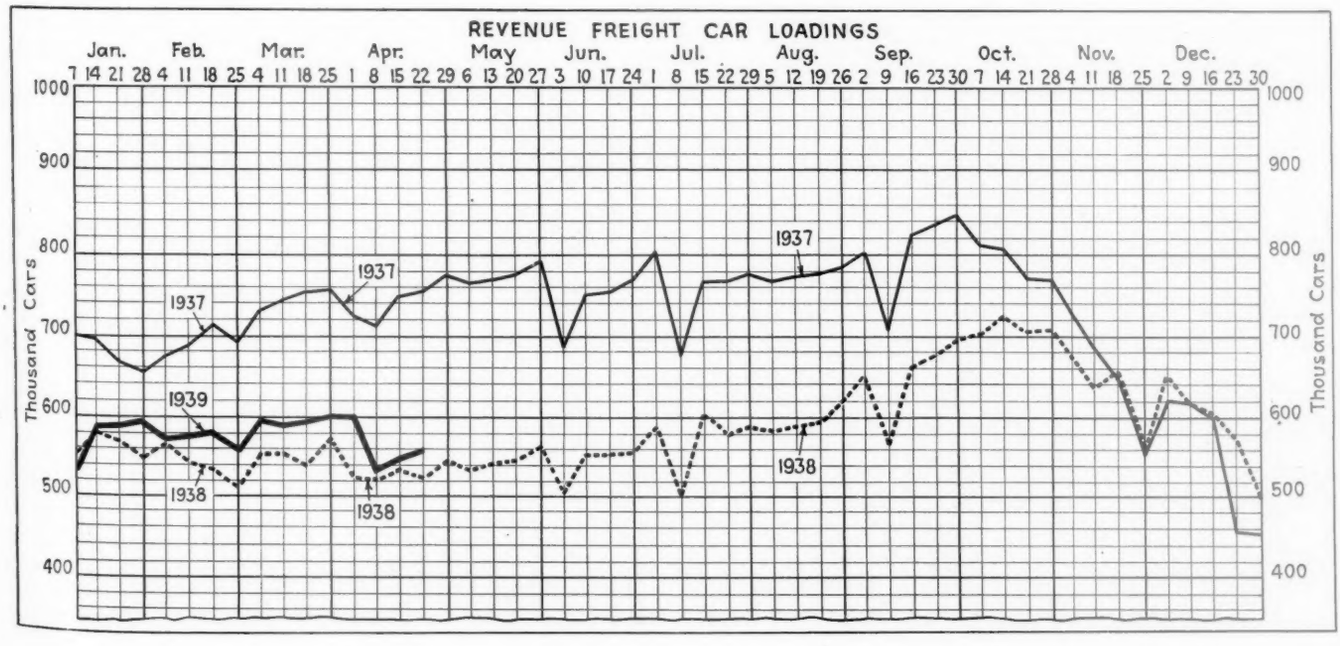
Altogether 171 shuttle trains were operated. The first scheduled run left Pennsylvania station at 8:00 a. m. and continuous service was provided until 4:00 a. m., Monday morning.

The Pennsylvania operated a special train of 13 cars carrying a delegation of over 500, consisting of members of Congress and their families, from Washington, D. C., direct to the World's Fair station for participation in ceremonies incident to the opening of the exposition. The train made the run in four hours and stopped only at Pennsylvania station, N. Y., to change from a Pennsylvania a.c. electric locomotive to a Long Island d.c. locomotive.

Hoboken Manufacturers' Divisions on Seatrain Traffic

Examiner E. J. Hoy has recommended in a proposed report that the Interstate Commerce Commission dismiss a complaint of the Hoboken Manufacturers' Railroad Company with a finding that the complainant's divisions of joint class and commodity rates on traffic interchanged by it with Seatrain Lines, Inc., are not unjust, unreasonable, inequitable or unduly prejudicial. The complaint arose when connections of the Hoboken reduced from $1.35 per ton to 60 cents the latter's division on Seatrain traffic moving on lighterage-free rates, the defendants' contention being that the car-carrying vessel's operation precluded the necessity for the Hoboken's loading or unloading such traffic and thus all Seatrain tonnage should bring the Hoboken only the 60-cents-per-ton division received by it without complaint on non-lighterage-free freight.

The examiner asserted that determination of the issue depends in large part on whether certain payments which Hoboken makes to Seatrain may be properly in-



cluded in the former's costs for performing its part of the through transportation; and he found that such payments may not properly be thus included and the defendants thereby required to absorb them in the form of increased divisions. Since the complaint was filed on December 31, 1936, the above Hoboken divisions figures of $1.35 per ton and 60 cents have been increased slightly as a result of the Ex Parte 123 decision.

Meyer and McManamy Leave I. C. C.

Two veteran Interstate Commerce Commissioners—Balthasar H. Meyer and Frank McManamy—were out of public life this week when President Roosevelt granted the former's request that he be released by May 1, and J. Haden Alldredge was sworn in as Mr. McManamy's successor. The announcement that the President had granted the Meyer request came from I. C. C. Secretary W. P. Bartel on April 29, while on May 1 came his announcement that Commissioner Alldredge had that day taken his oath and assumed his duties. Commissioner Lee, whose reappointment was confirmed by the Senate along with the Alldredge appointment, was resworn for his new term on April 28.

Mr. Meyer retired after serving continuously since January, 1911—longer than any other commissioner in I. C. C. history. As this issue went to press President Roosevelt had not substituted a nomination for that of Thomas R. Amlie (withdrawn) as Mr. Meyer's successor. A sketch of Mr. Meyer's career was published in the *Railway Age* of January 28, page 200; while that of Mr. McManamy, who had been associated with the commission for 30 years and a commissioner since 1923, appeared in the issue of February 18, pages 315-316. Mr. Meyer has opened a Washington office as a consultant on transportation matters, while Commissioner McManamy, as noted in last week's issue, is expected to retire to his new home in Daytona Beach, Fla.

I. C. C. Disclaims Jurisdiction Over Rentals Paid Private Car Lines

Finding that it has no authority to pass upon or to fix the compensation paid by railroads to private car companies for the use of equipment furnished directly by them to the railroads, the Interstate Commerce Commission, Division 2, has discontinued the I. & S. No. 4572 proceeding growing out of the railroad proposal to reduce to 1.5 cents per mile the rental paid for refrigerator cars owned by shippers and independent car companies. Meanwhile, because the rent for shipper-owned cars was involved and the tariff carried a reference mark designating the proposed change in the amount of the allowance as an "increase," the commission found that it did not exceed its authority in suspending the schedules on the basis of its power over the maximum compensation to be paid to a shipper for furnishing a transportation facility.

The reduced allowances were originally proposed by the railroads to become effective January 1, but a suspension and a postponement brought the effective date down to May 1. Allowances for shipper-owned refrigerator cars have been 1.75 cents a mile while 1.7 cents per mile has been paid for cars of independent car lines. The two-cents-per-mile rental paid on refrigerator cars owned by railroad affiliates was not involved in the case.

In view of the finding of lack of jurisdiction the decision directs that the tariff schedules concerned should be "promptly amended by striking therefrom all items covering the payment of compensation to private car companies, not shipper owned or controlled. . . . " Commissioner Splawn made a brief separate notation of his concurrence in the above findings, "made in the light of the arguments on the specific questions of jurisdiction;" although he had participated in the finding in *Mileage Allowance on Refrigerator Cars*, 218 I. C. C. 359, "in which Division 2, as then constituted, entertained jurisdiction, no point as to such jurisdiction was there raised."

I. C. C. Compilation of Income and Balance Sheet Items for February

The Interstate Commerce Commission on April 29 made public its latest monthly compilation of selected income and balance sheet items, showing February's net deficit of the Class I roads as $24,364,178 and that for this year's first two months as $33,085,497, as reported a few days earlier by the Association of American Railroads and noted in the *Railway Age* of April 29. The foregoing compare with a February, 1938, red figure of $44,404,605, and one of $77,724,911 for last year's first two months.

Eighty-five Class I roads reported net deficits for February, while 47 reported net incomes; in February, 1938, there were 104 net deficits and 28 net incomes. The consolidated statement and that showing the net incomes or net deficits of roads having annual operating revenues above

SELECTED INCOME AND BALANCE-SHEET ITEMS OF CLASS I STEAM RAILWAYS

Compiled from 135 Reports (Form IBS) Representing 140 Steam Railways
(Switching and Terminal Companies Not Included)

TOTALS FOR THE UNITED STATES (ALL REGIONS)

For the month of February 1939	For the month of February 1938	*Income Items*	For the two months of 1939	For the two months of 1938
$18,590,727	*$1,909,126	1. Net railway operating income	$51,491,447	$5,234,900
9,847,761	10,382,950	2. Other income	22,156,051	23,056,227
28,438,488	8,473,824	3. Total income	73,647,498	28,291,127
1,984,044	1,993,841	4. Miscellaneous deductions from income	4,137,456	4,250,471
26,454,444	6,479,983	5. Income available for fixed charges	69,510,042	24,040,656
		6. Fixed charges:		
10,175,076	10,274,546	6-01. Rent for leased roads and equipment	21,009,657	20,549,480
39,449,935	39,381,631	6-02. Interest deductions	ø79,197,977	ø78,750,046
180,480	215,836	6-03. Other deductions	361,645	440,894
49,805,491	49,872,013	6-04. Total fixed charges	100,569,279	99,740,420
*23,351,047	*43,392,030	7. Income after fixed charges	*31,059,237	*75,699,764
1,013,131	1,012,575	8. Contingent charges	2,026,260	2,025,147
*24,364,178	*44,404,605	9. Net income	*33,085,497	*77,724,911
16,724,003	16,698,450	10. Depreciation (Way and structures and Equipment)	33,528,311	33,452,410
1,527,875	778,548	11. Federal income taxes	3,564,971	2,239,633
		12. Dividend appropriations:		
10,788,739	13,162,485	12-01. On common stock	12,291,454	17,370,900
2,631,147	2,583,169	12-02. On preferred stock	3,586,919	3,268,876

Selected Asset Items	Balance at end of February 1939	Balance at end of February 1938
13. Investments in stocks, bonds, etc., other than those of affiliated companies (Total, Account 707)	$648,404,264	$662,129,970
14. Cash	445,893,982	320,850,616
15. Demand loans and deposits	15,321,338	4,111,333
16. Time drafts and deposits	19,811,874	28,205,022
17. Special deposits	53,466,744	63,994,740
18. Loans and bills receivable	1,280,586	3,707,558
19. Traffic and car-service balances receivable	56,604,086	49,757,613
20. Net balance receivable from agents and conductors	46,654,440	41,991,919
21. Miscellaneous accounts receivable	122,240,970	135,306,888
22. Materials and supplies	323,582,673	382,046,515
23. Interest and dividends receivable	18,885,351	23,911,839
24. Rents receivable	1,194,268	1,315,223
25. Other current assets	3,316,381	4,066,856
26. Total current assets (items 14 to 25)	$1,108,252,693	$1,059,266,122

Selected Liability Items	Balance at end of February 1939	Balance at end of February 1938
27. Funded debt maturing within 6 months †	$266,235,787	$180,147,832
28. Loans and bills payable ‡	244,091,429	229,217,737
29. Traffic and car-service balances payable	73,260,168	67,394,315
30. Audited accounts and wages payable	225,999,495	236,932,761
31. Miscellaneous accounts payable	66,526,548	64,706,213
32. Interest matured unpaid	832,080,803	683,320,030
33. Dividends matured unpaid	1,545,159	2,383,932
34. Funded debt matured unpaid	644,762,239	507,730,094
35. Unmatured dividends declared	13,699,353	15,613,644
36. Unmatured interest accrued	95,167,519	98,365,347
37. Unmatured rents accrued	33,334,261	32,288,610
38. Other current liabilities	21,400,245	18,449,142
39. Total current liabilities (items 28 to 38)	$2,251,867,219	$1,956,401,825
40. Tax liability (Account 771):		
40-01. U. S. Government taxes	$51,730,934	$61,877,669
40-02. Other than U. S. Government taxes	139,707,804	142,327,078

* Deficit or other reverse items.
ø Represents accruals, including the amount in default.
† Includes payments which will become due on account of principal of long-term debt (other than that in Account 764, Funded debt matured unpaid) within six months after close of month of report.
‡ Includes obligations which mature not more than 2 years after date of issue.

NET INCOME OF LARGE STEAM RAILWAYS WITH ANNUAL OPERATING REVENUES ABOVE $25,000,000

(Switching and Terminal Companies Not Included)

Name of railway	Net income after deprec. For the two months of 1939	Net income after deprec. For the two months of 1938	Net income before deprec. For the two months of 1939	Net income before deprec. For the two months of 1938
Alton R. R.	* $355,878	* $365,118	* $313,110	* $304,143
Atchison, Topeka & Santa Fe Ry. System ø	* 2,066,737	* 4,023,529	* 102,384	* 2,058,549
Atlantic Coast Line R. R.	441,030	1,084,862	795,759	1,418,935
Baltimore & Ohio R. R.	* 1,784,333	* 5,367,601	* 583,942	* 4,147,213
Boston & Maine R. R.	* 231,530	* 1,182,945	26,989	* 912,621
Central of Georgia Ry.†	* 509,978	* 649,109	* 367,921	* 505,864
Central R. R. of New Jersey	* 823,443	* 690,408	* 590,752	* 453,753
Chesapeake & Ohio Ry.	2,918,649	2,063,792	4,297,955	3,449,209
Chicago & Eastern Illinois Ry.‡	* 310,901	* 349,018	* 212,137	* 244,966
Chicago & North Western Ry.‡	* 3,500,169	* 4,198,031	* 2,671,004	* 3,348,779
Chicago, Burlington & Quincy R. R.	* 370,788	* 1,531,558	493,124	* 694,549
Chicago, Great Western R. R.‡	* 287,144	* 572,133	* 197,860	* 482,401
Chicago, Milwaukee, St. Paul & Pacific R. R.‡	* 3,388,270	* 4,037,369	* 2,422,545	* 3,093,108
Chicago, Rock Island & Pacific Ry.‡	* 2,221,180	* 2,752,324	* 1,537,278	* 2,060,744
Chicago, St. Paul, Minneapolis & Omaha Ry.	* 691,711	* 640,954	* 594,866	* 542,729
Delaware & Hudson R. R.	176,123	* 526,656	346,056	* 351,793
Delaware, Lackawanna & Western R. R.	* 471,023	* 946,497	* 63,727	* 532,822
Denver & Rio Grande Western R. R.‡	* 877,718	* 1,191,727	* 675,606	* 991,479
Elgin, Joliet & Eastern Ry.	377,243	* 249,045	541,034	* 81,535
Erie R. R. (including Chicago & Erie R. R.)§	* 1,218,530	* 2,627,246	* 605,525	* 1,996,223
Grand Trunk Western R. R.	* 474,058	* 1,049,278	* 281,190	* 860,076
Great Northern Ry.	* 2,966,487	* 3,605,773	* 2,349,867	* 2,984,967
Illinois Central R. R.	* 440,111	* 399,704	668,348	670,119
Lehigh Valley R. R.	* 108,923	* 723,327	247,190	* 355,609
Long Island R. R.	* 646,976	* 599,841	* 450,971	* 404,368
Louisville & Nashville R. R.	810,640	* 648,747	1,532,616	67,777
Minneapolis, St. Paul & Sault Ste. Marie Ry.‡	* 1,539,320	* 1,505,282	* 1,334,317	* 1,301,155
Missouri-Kansas-Texas Lines	* 844,767	* 867,479	* 622,060	* 649,888
Missouri Pacific R. R.‡	* 2,589,478	* 3,006,413	* 1,863,697	* 2,270,620
New York Central R. R.¶	* 3,115,203	* 7,294,907	* 483,323	* 4,617,571
New York, Chicago & St. Louis R. R.	* 22,399	* 718,372	241,370	* 433,705
New York, New Haven & Hartford R. R.‡	* 946,897	* 2,437,877	* 380,597	* 1,875,909
Norfolk & Western Ry.	3,790,242	1,305,261	4,619,409	2,135,496
Northern Pacific Ry.	* 2,203,587	* 2,823,173	* 1,638,708	* 2,259,129
Pennsylvania R. R.	943,713	* 3,689,620	5,161,100	313,070
Pere Marquette Ry.	* 49,610	* 832,610	346,301	* 394,977
Pittsburgh & Lake Erie R. R.	287,286	* 92,153	661,126	282,503
Reading Co.	473,068	* 283,374	992,064	235,782
St. Louis-San Francisco Ry.‡	* 2,232,911	* 2,787,113	* 1,720,750	* 2,266,482
St. Louis Southwestern Lines‡	* 443,610	* 406,383	* 340,356	* 302,519
Seaboard Air Line Ry.†	* 851,158	* 1,199,436	* 495,957	* 860,815
Southern Ry.	* 450,197	* 1,990,139	112,815	* 1,477,963
Southern Pacific Transportation System‖	* 3,257,012	* 5,549,295	* 1,934,202	* 4,165,127
Texas & Pacific Ry.	69,402	* 95,493	269,374	103,048
Union Pacific R. R. (including leased lines)	492,416	356,144	1,753,482	1,595,621
Wabash Ry.†	* 1,066,166	* 1,813,284	* 708,926	* 1,454,663
Yazoo & Mississippi Valley R. R.	* 227,784	* 58,468	* 150,386	29,344

* Deficit.

† Report of receiver or receivers.

‡ Report of trustee or trustees.

§ Under trusteeship, Erie R. R. only.

ø Includes Atchison, Topeka & Santa Fe Ry., Gulf, Colorado & Santa Fe Ry., and Panhandle & Santa Fe Ry.

¶ Includes Boston & Albany, lessor to New York Central R. R.

‖ Includes Southern Pacific Company, Texas & New Orleans R. R., and leased lines. The report contains the following information: "Income reported hereon excludes offsetting debits and credits for rent for leased roads and equipment and bond interest, between companies included herein. Interest on bonds of, and rental income from, separately operated solely controlled affiliated companies, whether earned or not, are included in this statement, in order that such income credits will offset income debits reflected in the net deficit of such companies. Operations of all separately operated solely controlled affiliated companies, resulted in a net deficit of $1,490,386 for the two months ended February 28, 1939, and $1,303,364 for the two months ended February 28, 1938, which is not included in this statement."

$25,000,000 are given in the accompanying tables.

Bills in Congress

The House on May 1 completed Congressional action on the bill, S. 1034, authorizing the Secretary of War to terminate certain leases of the Long Island at the United States Army Base at Bay Ridge, Brooklyn, N. Y. At the same time a similar House bill (H. R. 3408) was laid on the table.

The Senate committee on interstate commerce has reported favorably a bill (S. 1307) authorizing the Secretary of War to grant a revocable license to the Union Pacific to maintain certain trackage on the Fort Leavenworth Military Reservation. The report states that the trackage, which the U. P. now operates without express legal authorization, meets a real need.

Senator Bilbo, Democrat of Mississippi, has introduced S. 2300 to amend the law relating to settlements with the government upon termination of federal control. S. 2310 introduced by Senator Neely, Democrat of West Virginia, would provide for standard daylight-saving time; while H. R. 6064, introduced by Representative Bland, Democrat of Virginia, would provide for the regulation of wharf operators by the United States Maritime Commission.

Mahaffie Hits Statute Extension by Administrative Construction

The Interstate Commerce Commission in a report upon reargument has affirmed Division 3's finding that the Cincinnati & Lake Erie does not fall within the exemption proviso in the first paragraph of section 1 of the Railroad Retirement Act and the Carriers' Taxing Act. The majority report was by Commissioner McManamy who also wrote Division 3's majority report as noted in the *Railway Age* of August 27, 1938, page 334.

Commissioner Mahaffie filed a brief dissenting opinion, while the report listed Commissioners Eastman and Porter as other dissenters. The latter had also been a dissenter to the decision of Division 3. Commissioner Lee did not participate in the disposition of the proceeding.

In Commissioner Mahaffie's judgment the findings of the majority were "not warranted by the facts here of record under the language of the statutes construed." Quoting the Retirement Act proviso which exempts any street, interurban or suburban electric railway unless such railway is operating "as a part of a general steam-railroad system of transportation," the dissenting commissioner pointed out that the majority affirmed Division 3's holding that the C. & L. E. should be ruled outside the exemption proviso on the basis of a finding that it is "a part of *the* general steam-railroad system."

"In my judgment," Commissioner Mahaffie goes on, "this construction can not be supported under the terms of the act, nor as in accord with the intent of the Congress in enacting it, but only in consideration of the beneficence of the purpose now sought to be accomplished. This basis of statutory construction I consider erroneous. The temptation, by administrative construction to extend the plain terms of a statute in order to attain an end thought desirable, is always present. It should be resisted. If it is considered desirable that the provisions of the Railroad Retirement Act cover employees engaged in additional forms of transportation that should be accomplished by legislation."

B. & M.-M. C. Solicit Off-Line Territory for World's Fair Visitors

The Boston & Maine and Maine Central are broadcasting the attractions of northern New England as a summer vacation center and all-year-round playground to prospective New York World's Fair visitors resident throughout the West and South by a new 36-page booklet "Relax in New England After the World's Fair," recently issued. The first run of 150,000 copies of the 9 in. by 12 in. booklet is now being circulated through the West and South as a part of a program of the northern New England roads to induce visitors to the Fair to make side-trips into their territory.

The booklet, prepared in colors, portrays a Maine beach scene on its cover. More than 75 attractive photographs of scenes in Massachusetts, Maine, Vermont and New Hampshire are included within. The foreword of the volume states that "Northern New England—thanks to the complete transportation system by rail, air and bus which serves it, is 'just around the corner' from New York City."

Retirement Board Appoints Regional Directors

Appointment of regional directors for the 12 administrative regions of the Railroad Retirement Board's field operations was recently announced by the Board. The main functions of the regional offices in charge of the regional directors will be to administer the Railroad Unemployment Insurance Act which goes into effect July 1.

According to a plan of decentralized field operation, unemployment insurance claims will be received initially by designated

agents of the railroads or other empolyers under the Act. The claims will then be sent to the regional offices for adjudication and certification for payment. The location of the regional offices, the Board's announcement said, "has been planned in cooperation with the railroads and railroad labor organizations and follows the general pattern of the rail systems of the country, particularly in relation to the location of railroad pay points and of treasury disbursing offices."

The names of the regional directors and the regions to which they are assigned are as follows:

George H. Parker, director of Region I with headquarters at Boston, Mass. This region includes all the New England states.

Alexander Fleisher, director of Region II with headquarters at New York. This region includes the states of New York; New Jersey; Pennsylvania, east of Pittsburgh; Delaware; Maryland; a small section of northeastern West Virginia; and the Cape Charles peninsula of Virginia.

Carlton Hayward, director of Region III with headquarters at Cleveland, Ohio. This region includes Pennsylvania, Pittsburgh and west; Ohio; Michigan; the eastern half of West Virginia; and northeastern and central Kentucky.

Francis E. Fleener, director of Region IV with headquarters at Chicago. This region includes the states of Indiana; Illinois; Iowa, with the exception of the southwestern corner; southern and northeastern Wisconsin; and southeastern Kentucky.

Walter Burr, director of Region V with headquarters at Richmond, Va. This region includes the District of Columbia; Virginia, except for a small area in the southwest and the Cape Charles peninsula; southeastern West Virginia; North Carolina, with the exception of the southwestern portion; and eastern South Carolina.

Leon L. Wheeless, director of Region VI with headquarters at Atlanta, Ga. This region includes the states of Georgia; Florida; Mississippi; Alabama; Tennessee; western South Carolina; western North Carolina; extreme southwestern Virginia; and southern Kentucky.

Harris G. Pett, director of Region VII with headquarters at Minneapolis, Minn. This region includes the states of Minnesota; North Dakota; South Dakota, except for a section in the southwest; eastern Montana; and northwestern Wisconsin.

William A. Murphy, director of Region VIII with headquarters at Kansas City, Mo. This region includes the states of Missouri; Oklahoma, except the tip of the pan handle; Arkansas, except the southwestern corner; Kansas, with the exception of the extreme west; the eastern half of Nebraska; the southwestern corner of Iowa; and a small section of southern South Dakota.

W. A. Rooksbery, director of Region IX with headquarters at Dallas, Texas. This region includes the states of Louisiana; Texas; the southwest corner of Arkansas; southern and eastern New Mexico; and a small piece of southeastern Arizona.

Harry K. Sorenson, temporarily assigned as director of Region X with headquarters at Denver, Colo. This region includes the states of Colorado; Wyoming; Utah; western Nebraska; extreme western Kansas; southwestern South Dakota; southern Idaho; southeastern Oregon; northeastern Nevada; the northern half of Arizona; northern and western New Mexico; and the tip of the Oklahoma pan handle.

Shirl L. Blalock, director of Region XI with headquarters at Seattle, Washington. This region includes the states of Washington; northern Idaho; the western half of Montana; and Oregon, except for the extreme south and west.

James B. Cress, director of Region XII with headquarters at San Francisco, California. This region includes the states of California; most of Nevada; the southern segment of Oregon; southern Arizona; and a small section of southwestern New Mexico.

3 Months N. O. I. Was $85,808,342

(*Continued from page 789*)

343 or 0.65 per cent; for the same period in 1938 those same roads had an operating deficit of $6,883,497 but in 1930 they had a net railway operating income of $50,797,431 or 2.84 per cent on investment. Gross in the Western District for the three months amounted to $319,209,792, an increase of 4.3 per cent above the same period in 1938 but a decrease of 32.8 per cent below the same period in 1930; operating expenses totaled $264,198,160, a decrease of 0.8 per cent compared with the same period in 1938 and a decrease of 29.7 per cent under the same period in 1930. For March alone the roads in the Western district had a net of $5,505,981, compared with $913,651 in March, 1938, and $18,602,173 in March, 1930.

I. C. C. Authorizes Foreclosure Sales

(*Continued from page 788*)

not assenting to the plan, of all classes which shall have accepted the plan. If the property of the debtor or intervening debtor or both so offered for sale should be sold to others than the reorganization managers, the plan herein approved shall be deemed inoperative except insofar as provision is made therein for the sale of the properties at such sales as may be ordered by the court."

"In the event of any such sale to the reorganization managers, the managers may in their discretion sell all or any portion of the new securities distributable under the plan in respect of securities of any bondholder, if neither such bondholder nor the class to which such bondholder belongs shall have accepted the plan, provided that bondholders in a class which shall not have accepted the plan, and who themselves shall not have accepted the plan shall have the right, if they shall so notify the managers within a period of 30 days after the confirmation of such sale, to assent to the plan and receive the securities allocated to them under the plan in lieu of their aliquot share of the proceeds of such sale. The proceeds of any such sale of securities may be used to pay the portion of the purchase price payable in cash on any such sale of the properties."

Other modifications of the final plan requested by the bondholders and approved by the commission include Provisions for (1) a new first mortgage under which no bonds would be issued in the reorganization but which would provide for the issue of not exceeding $1,000,000 of bonds for future financing should financing be impossible through income bonds; (2) making the interest on the new 4½ per cent income bonds fully cumulative up to a maximum of 13½ per cent, whether or not earned; (3) making the payments to the capital fund provided in the plan mandatory and providing that depreciation charged against income, except as to equipment, should be credited against the amount which may be deducted from income for the capital fund; (4) establishing a fund for the acquisition of equipment; (5) placing the stock of the reorganized company in escrow for 10 years to permit the sale of a controlling interest to some larger railroad system, based on a finding that, in the public interest and in the interest of the present bondholders, the reorganized company should be affiliated with a larger system; and (6) a new board of directors, specification of the functions to be performed by the reorganization managers, and miscellaneous matters.

The modified final plan provides that in the case of the capital fund payments shall be made mandatory to the extent necessary to provide for capital expenditures in the current year not made out of the proceeds of capital assets, and to maintain an unappropriated balance of $50,000 in the fund at the end of each year, but in the event the reorganized company be consolidated with or its properties operated or controlled by another railroad, such payments should not be required. Unappropriated amounts in the capital fund will not be available to pay contingent interest, but can be used to pay fixed interest.

The modified final plan will now be certified to the United States District Judge for the Eastern District of Washington, who will take it under advisement and decide upon its approval or rejection.

Canada May Get Dismissal Pact

(*Continued from page 787*)

ure, the Canadian bill omits such provision.

(4) The Washington Agreement provides that each plan of co-ordination shall provide for selection of operating forces from all the carriers involved. The proposed bill omits this provision, inasmuch as the Canadian National-Canadian Pacific Act already provides for negotiation between representatives of the Canadian National and the Canadian Pacific with respect to any co-operative measure.

(5) The Canadian bill contains a provision not found in the Washington Agreement to the effect that no employee is entitled to receive a displacement allowance in any one year greater than his compensation in the 12 months' period preceding the date of his new employment status. [The Washington Agreement provides that an employee continuing in service after co-ordination is entitled to receive compensation for time worked in excess of his average monthly time during the 12-month period preceding the date of the plan. —Ed.]

(6) The Canadian bill does not provide payment of compensation to an employee with less than one year of service to his credit.

(7) The Canadian bill differs from the Washington Agreement with respect to the details of provisions for change of residence of employees. Negotiations as to the value of homes, loss sustained in sale, etc., are determined in the Washington Agreement by joint conference between the employees and the carrier, whereas the proposed Canadian bill provides that, in case of dispute, the matter be referred to a permanent committee of adjustment formed by representatives of the railway and the employees, and gives final appeal to county court or superior court judges to determine the compensation to be paid for changes in residence.

(8) The Washington Agreement provides that in the event of dispute in connection with any co-ordination project, it may be referred to a committee composed

of signatories to the agreement, and, if that fails, to a neutral referee selected by the National Mediation Board whose decision is to be final and conclusive. The Canadian bill provides for a permanent committee of adjustment to be composed of employees and carrier representatives. In the event of failure of settlement, the dispute is to be referred to a board of three arbitrators, one to be a representative of the interested employees, one a representative of the two railroad companies and the third to be selected by the two so-named or by the Minister of Labor. The award of this board of arbitrators is final and conclusive and is not open to review in any court.

(9) Whereas the Washington Agreement apparently contemplates the extension of its benefits to its employees who become employees during the currency of the agreement, the Canadian bill limits the application of its provisions to employees who are in service at the date of the coming into force of the schedule of the bill.

U.S. C. of C. Hears Talks on Transport

(*Continued from page 789*)

on, "who believe that the solution of the railroad problem requires a new approach which would involve measures of a radical character. But the comparatively slight impression made upon the Conference by all proposals of such a nature must have brought home to those who hold such views how unprepared is the public opinion of the business community and how much education must be carried on before there is any possibility of passing legislation of such fundamental character. In my own opinion, the time is not ripe for such proposals, the necessary spade work has not been done, and it would be a great mistake to delay the assistance that could be given the railroads at this session of Congress because of the attempt to combine with such measures a thoroughgoing revision and possible reorientation of our national railroad policy."

Fletcher Thinks Now Is Good Time for Broad-Gage Legislation

Judge Fletcher did not agree with the foregoing. He thinks that now is the acceptable time to go in for broad-gage legislation; and he went on to point out that if it doesn't come in this year of no national elections, it will have to be postponed for at least two more years. Continuing, the A. A. R. vice-president took up the Transportation Conference's program, and reviewed the status or lack of status of each proposal therein in bills now before Congress. In the course of such discussion Judge Fletcher indicated that in his opinion the prospects are favorable for the liberalization of Reconstruction Finance Corporation terms on railroad loans; giving the I. C. C. power to prescribe minimum as well as maximum joint rail-water rates; amendments to the Interstate Commerce Act's consolidation provisions; repeal of land grant rates; and enactment of the Chandler bill to facilitate voluntary reorganizations. Judge Fletcher emphasized the desirability for enactment of the latter in the form in which it unanimously passed the House—without Senate amendments framed by "put-them-through-the-ringer" boys. He also revealed that the A. A. R. was about ready to submit to Congressional committees a bill "which would carry into effect the recommendations of the Conference on the subject of taxation."

On the question of disposing of the Federal Barge Line, the A. A. R. general counsel was not certain that much progress will be made at this session, although he has heard "an interesting suggestion," which emanated from the transport-legislation sub-committee of the House committee on interstate and foreign commerce, that this government-owned water carrier "should not only be subjected to regulation as to its rates, but that there should be lodged with the Interstate Commerce Commission the power to dispose of the Barge Line at any time when the public interest would permit."

Turning to proposals for the regulation of water lines, a subject which was not covered by the Conference's recommendations, Judge Fletcher said that "only time will tell whether Congress, at this time, will complete the program by including water carriers." His cautious summing-up was: "It is impossible at this time to predict just what will be the outcome of the various bills pending in Congress, but I have a well defined hope that Congress will not adjourn without some helpful legislation."

Day for N. I. T. League; Craven for Investors

Chairman Day of the N. I. T. League's executive committee read a brief statement embodying views similar to those expressed by him on behalf of the League at recent Senate committee on interstate commerce hearings on S.2009, the Wheeler-Truman "key bill." He submitted that there is no necessity at this time for either a recodification or restatement of the Interstate Commerce Act, having previously noted the "very definite impression in some quarters" that one of the aims of the proponents of codification is "to control the physical supply of transportation by restricting and discouraging the development and operation of both contract and common carriers on the highways and waterways." The shippers, he added, oppose that, although they are likewise opposed "to the promotion by artificial stimulants of any mode of transportation which cannot be self-supporting under fair and reasonable conditions." In closing Mr. Day suggested that some transportation authority or board, either within or independent of the I. C. C., might well be created to bring forth unbiased reports which should "better enable all of us to helpfully deal with the transportation situation as a whole."

Calling the investor the "forgotten man" amid the maneuverings of special groups to maintain advantages which the present set-up gives them, Mr. Craven warned that "progress in straightening out the railroads depends on whether we can bring ourselves as a people to the level of intelligent action which will result in legislation designed to meet the plain needs of the people as a whole, without regard for the purposes of pressure groups which profit by the uneconomic conditions resulting from the absence of such legislation." Previously he had cited specifically the opposition of labor and communities to railroad consolidations, which "disinterested thinkers commonly agree are necessary." He added that "because of the pressure, primarily of organized labor, Congress is considering no legislation which courageously faces the problem of eliminating the competitive burdens through consolidations or coordinations."

Motor Carriers and Water Lines Are Fearful

Mr. Horton, who pointed out that the motor carriers are "objecting strenuously" to any codification of the Interstate Commerce Act, predicted that if Congress passes S. 2009, the Wheeler-Truman version of codification, there will be no motor transport industry within a year. In Mr. Horton's opinion the Transportation Conference's program comprises the "Key to Railroad Recovery." "We strenuously object," he said in closing, "to legislation such as this now before Congress which is designed to burden competitive transportation in order to throw some little traffic back to the railroads. We do, however, feel sympathetic with the problem of the railroads and will support reasonable measures to improve their situation. We believe their first need is legislation to permit them to assist themselves in adapting their plant and services to modern conditions. The recommendations of the Transportation Conference were intended for this purpose and I believe they constitute a program well calculated to assist the railroads in every legitimate way."

President Taylor of the American Merchant Marine Institute, recalling the cooperative spirit which first pervaded the deliberations of the Transportation Conference, deplored the fact that this "cooperative approach" began to fade "after many constructive recommendations" were made by the Conference. "The rail carriers," he said, "deluded no doubt by the partisan report of the committee-of-six, concluded that their salvation could only be worked out at the expense of other forms of transportation. It should be kept in mind that the non-rail carriers were most sympathetic to the railroad problem. They did not feel, however, that any economic or moral justification had been made for this sacrifice which their railroad friends proposed. Consequently the cooperative approach was abandoned and the controversy became one for an attempted solution by the Congress."

Later Mr. Taylor said that there was no objection on the part of his industry to "a generous program for the railroads." "We do not, however," he went on, "propose to be the carcass for the expected feast. It strikes us as too late a date to turn the calendar back. It would be a strange national policy to seek to help the railroads at the expense of the water carrier, the shipper and the national needs for defense."

Supply Trade

The Symington-Gould Corporation, New York, has been appointed to handle the national sales and installation of the Felpax lubricator of the **Miller Felpax Company,** Winona, Minn.

J. E. Buckingham, formerly vice-president of the Lincoln Electric Railway Sales Company, has been elected vice-president in charge of all railway sales for the **Portable Plating & Equipment Company,** Chicago.

E. H. Batchelder, Jr., senior vice-president and a director of the **Insulite Company,** Minneapolis, Minn., has resigned to become vice-president of the American Rock Wool Corporation, Wabash, Ind.

Melvin Pattison, president and treasurer of the **Industrial Brownhoist Corporation,** Bay City, Mich., has been elected chairman of the board and has been succeeded by **Hoyt E. Hayes,** vice-president. **James B. Hayden,** assistant sales manager, has been promoted to sales manager.

Willard H. Cobb, general factory manager, mechanical goods plants, **United States Rubber Company,** has been appointed general manager of the mechanical goods and general products division, including supervision of the manufacture of Lastex, yarn and rubber thread, with headquarters at New York.

R. B. Mildon, vice-president of the **Westinghouse Electric & Manufacturing Co.,** formerly in charge of the East Pittsburgh, Pa., division, has moved to Pittsburgh, Pa., to assume special sales assignments and **A. C. Streamer,** manager of the switchgear division, has been appointed general manager of the East Pittsburgh division.

J. L. Young, general manager of the **Drainage Engineering Company,** with headquarters at Middletown, Ohio, and **W. P. Greenawalt,** district manager, **Ingot Iron Railway Products Company,** at Chicago, resigned their positions with these companies, effective May 1, to organize the **Young & Greenawalt Company,** Chicago, which will engage in general railway contracting and the sale of railway supplies.

J. A. Mayer, manager at Cleveland, Ohio, since 1936 for the **Graybar Electric Company, Inc.,** New York, has been transferred to the general department of the company as assistant general power apparatus sales manager. **H. G. Cook,** after 19 years of service at Grand Rapids, Mich., has been appointed manager at that place. **A. L. Perry,** general superintendent of the general department has been appointed Erie, Pa., district manager.

Foster E. Wortley, manager of **The American Rolling Mill Company's** Cleveland, Ohio district sales office, has been appointed assistant manager of the midwestern sales area. He will have his headquarters at Middletown, Ohio, effective May 16. **Henry L. Woods, Jr.,** who has been attached to the Armco sales office at Detroit, Mich., as a salesman for the past 10 years, has been appointed manager of the Cleveland office to succeed Mr. Wortley.

Marvin W. Smith, has been elected a vice-president of the **Westinghouse Electric & Manufacturing Co.,** with headquarters at Pittsburgh, Pa., as was announced in the *Railway Age* of April 29. He was born on October 8, 1893, at Overton, Tex. Mr. Smith attended high school and was graduated from Texas Agricultural and Mechanical College in 1915, with the degree of bachelor of science in electrical engineering. The same year he enrolled in the student engineering course at the Westinghouse East Pittsburgh, Pa. works. He subsequently studied special design problems for six months under B.

Marvin W. Smith

G. Lamme, then chief engineer of Westinghouse. In 1917, he was assigned to the power engineering department and since that time he has been identified with the design and construction of electrical generating equipment. From 1927 to 1930, he served as section engineer of the power department and then was appointed division engineer, in which position he directed the activities of engineers and draftsmen in the design of large alternating current generators. Mr. Smith was appointed manager of engineering in 1936, which position he held until his recent election as vice-president. In 1938, he received a professional degree in engineering from his alma mater and in addition he received the Westinghouse order of merit award. Mr. Smith is a member of a number of technical organizations.

OBITUARY

Lawrence M. Viles, chairman of the Buda Company, Harvey, Ill., died of a heart attack in Chicago on April 27. He was born in that city on September 5, 1882, and graduated from Cornell University in 1904. He then entered the employ of the Buda Foundry and Manufacturing Company, now the Buda Company, of which his father was president. After holding various positions he was elected president in 1918 and chairman of the board in 1937.

Construction

BROWNSVILLE SWITCHING & TERMINAL—PORT ISABEL & RIO GRANDE VALLEY.—These companies have been denied permission by Division 4 of the Interstate Commerce Commission to construct separate five-mile lines within the industrial area of Brownsville, Tex.

CHICAGO & NORTH WESTERN AND CHICAGO, NORTH SHORE & MILWAUKEE. — Contract No. 5 for grading work on the Winnetka, Ill., grade crossing elimination project, amounting to $1,015,372, has been awarded the Minder Construction Corporation, Chicago, by the Board of Local Improvements of the Village of Winnetka. This project was described on page 966 of the *Railway Age* of December 31, 1938.

CHICAGO, ROCK ISLAND & PACIFIC.—A contract has been awarded Oran Speer, Alvard, Tex., for 164,000 cu. yd. of grading in connection with a channel change for Rattlesnake Creek near Bucklin, Kan. This channel change will allow the elimination of four pile trestle bridges each approximately 90 ft. long.

CHICAGO, ROCK ISLAND & PACIFIC.—This road has awarded two contracts for grading work for grade revisions at three points which will reduce ruling grades on the line between Dalhart, Tex., and Kansas City, Mo., with the exception of a few momentum grades, to an effective grade of 0.5 per cent. The work consists of 232,000 cu. yd. of grading (in 3.5 miles) near Imogene, Kan., 257,800 cu. yd. (in 2.2 miles) near Fowler, Kan., and 133,000 cu. yd. of grading (in 1.5 miles) near Optima, Okla. The first two grading projects have been awarded to Stanley-Tidd Company, Hutchison, Kan., and the latter to the Morrison-Knudsen Company, Boise, Ida. The bridge work in connection with these grade revisions will probably be done by company forces.

ILLINOIS CENTRAL.—A contract amounting to approximately $132,000 has been awarded the Austin Bridge Company, Dallas, Tex., by the Louisiana Highway Commission for the Market Street bridge over the tracks of the Yazoo & Mississippi Valley (Illinois Central) in Shreveport, La. The bridge will consist of seven reinforced concrete slab spans, each 15 ft. long, and 15 I-beam spans varying in length from 23 ft. to 35 ft., resting on reinforced concrete bents with spread footings. The total length of the bridge will be 585 ft. and the deck will provide two roadway lanes each 25 ft. 4 in. wide and a sidewalk 6 ft. wide.

ST. LOUIS SOUTHWESTERN.—This road has awarded a contract amounting to approximately $11,850 to the Ross & White Co., Chicago, for the design and erection complete of a 3-track, 100-ton, fireproof,

shallow-pit type locomotive coaling station to be erected immediately at Malden, Mo.

Equipment and Supplies

Freight Cars Up in April Buying

Orders for 2,695 cars highest this year; 19 locos. and 14 passenger cars purchased

American railway equipment manufacturers received orders during April for a total of 19 locomotives (all Diesel-electric); 2,695 freight cars; and 14 passenger-train cars. Totals for the year are thereby brought to 93 locomotives, 5,702 freight cars and 121 passenger-train cars, which compare with 39 locomotives, 819 freight cars and 52 passenger-train cars ordered during the corresponding four months of 1938.

No export orders were received during the month and no orders were placed with Canadian builders.

Carriers ordered 86,127 tons of rail during April which brings the total for the year thus far to 491,608 tons.

Domestic Equipment Orders Reported in Issues of the Railway Age in April, 1939

(Excluding April 1)

LOCOMOTIVES

Date	Name of Railroad	No.	Type	Builder
Apr. 15	Wabash Car & Equipment Co. (leased to Wabash)	3	Diesel-electric Sw.	Electro-Motive Corp.
		1	Diesel-electric Sw.	American Locomotive Co.
Apr. 15	Phelps Dodge Corp.	4	Diesel-electric	Electro-Motive Corp.
Apr. 15	Missouri Pacific	2	Diesel-electric	Electro-Motive Corp.
		5	Diesel-electric Sw.	Electro-Motive Corp.
		1	Diesel-electric Sw.	Baldwin Locomotive Works
		1	Diesel-electric Sw.	American Locomotive Co.
Apr. 29	Kansas City Southern	2	Diesel-electric	Electro-Motive Corp.

FREIGHT CARS

Apr. 8	United Carbon Co.	10	Cov. Hopper	American Car & Foundry
Apr. 15	Missouri Pacific	1,000	Gondola	Mt. Vernon Car
Apr. 15	Missouri-Illinois (Mo. Pac.)	125	Box	Mt. Vernon Car
		25	Gondola	Mt. Vernon Car
Apr. 15	Despatch Shops, Inc.	200	Cov. Hopper	Company Shops
Apr. 22	Wabash	35	Caboose	Company Shops
Apr. 22	Maine Central	300	Box	Magor Car Corp.
Apr. 29	Great Northern	1,000	Box	Pullman-Standard

PASSENGER-TRAIN CARS

Apr. 15	Missouri Pacific	2	Mail-Baggage	
		2	Mail-Storage-Express	American Car & Foundry
		4	Deluxe Coaches	
		2	Diner-C. Lounge	
		2	Parlor-Observation	
Apr. 22	Pullman Company (U. P.-C. & N. W.)	2	Sleeping	Pullman-Standard

North Western Asks $74,484,000 Nine-Month Budget

The Chicago & North Western has petitioned the federal district court for approval of a $74,484,000 operating budget for the last nine months in 1939. In addition, authority is sought to purchase 820 freight and passenger cars, at an estimated cost of $4,010,000. New equipment sought includes 500 70-ton coal cars, 300 50-ton box cars and 20 streamlined passenger cars ordered for the "400." The court set May 8 for hearing.

LOCOMOTIVES

THE LEHIGH VALLEY has ordered three 20,000-gal. capacity locomotive tenders from the American Locomotive Company.

THE ATCHISON, TOPEKA & SANTA FE has purchased 31 Diesel electric locomotives including thirty 1,000 hp. switchers and one 4,000 hp. passenger locomotive. Thirteen of the switchers and the passenger locomotive were ordered from the Electro-Motive Corporation, twelve switchers were ordered from the American Locomotive Company, and five switchers from the Baldwin Locomotive Works. When these locomotives are delivered, the Santa Fe will have 41 Diesel electric switching locomotives and 11 Diesel electric passenger locomotives with an aggregate horsepower of 37,500 in switching service and 27,400 in passenger service.

PASSENGER CARS

THE ATCHISON, TOPEKA & SANTA FE is inquiring for 11 lightweight passenger cars.

FREIGHT CARS

THE UNITED STATES NAVY DEPARTMENT has ordered six flat cars of 50 tons' capacity, from the Greenville Steel Car Company.

THE MAINE CENTRAL has ordered 300 gondola cars from the Bethlehem Steel Company. Inquiry for this equipment was reported in the *Railway Age* of March 4.

THE DENVER & RIO GRANDE WESTERN has placed an order with the Pressed Steel Car Company, subject to the approval of the federal district court, for 400 box cars, 100 automobile box cars, 50 gondola cars and 100 underframes. Inquiry for this equipment was reported in the *Railway Age* of March 18.

IRON AND STEEL

THE GREAT NORTHERN has ordered 10,000 tons of rails, and if business permits will increase the order to 20,000 tons later in the year.

THE MOBILE & OHIO has been authorized by the federal district court to purchase 1,000 tons of 90-lb. rails and fastenings.

SIGNALING

ATLANTA, BIRMINGHAM & COAST.—Sealed proposals will be received by the purchasing agent of this road, Atlanta, Ga., until 10:00 a. m. (central time) on May 23, for the furnishing of materials necessary for installation of five flashing light highway grade-crossing signal projects under the federal grade-crossing program in the State of Georgia.

BALTIMORE & OHIO.—Sealed bids will be received in the office of the purchasing agent, Charles & Baltimore streets, Baltimore, Md., until 11:00 a. m. (e.s.t.) May 25, for material required to install flashing light signal automatic gate combination at seven highway grade-crossings in Lincoln, Ill., located on the Alton Railroad. Work is being done under the federal grade-crossing program.

THE UNION SWITCH & SIGNAL CO. has received an order from the American Locomotive Company covering 15 sets of cab signal equipment, for new steam locomotives now being built for the Union Pacific. This equipment is of the two-indication continuous single-element type and these new locomotives will operate in the territory between North Platte, Neb., and Cheyenne, Wyo., which is already equipped for cab signal operation.

TRADE PUBLICATIONS

PYLE-NATIONAL FITTINGS.—The Pyle-National Company, Chicago, has recently issued two new bulletins. Bulletin No. 207 describes an improved type of heavy-duty conduit fittings designed for easier application, greater strength, and maximum security of wiring installations. Bulletin No. 1105 gives a description, ordering references, and price lists for explosion-proof and dust-tight Pylets; this bulletin supersedes all previous listings.

KINNEAR ROLLING DOORS—A 36-page catalogue describing the complete line of rolling doors, fire doors and shutters, metal rolling grilles, bifolding doors, door operating equipment and wood rolling partitions manufactured by the Kinnear Manufacturing Company, Columbus, Ohio, has been published by that company. The catalogue is well illustrated with examples of many types of installations of these products and their design, construction and operation are fully explained.

Financial

ARKANSAS VALLEY INTERURBAN.—*Abandonment.*—Trustees of this road have applied to the Interstate Commerce Commission for authority to abandon the entire line between Wichita, Kans., and Hutchinson, with a branch from Van Arsdale to Newton, a total of about 60 miles.

ATLANTIC COAST LINE.—*Abandonment.*—This road has applied to the Interstate Commerce Commission for authority to abandon its 25.4-mile line between Walterboro, S. C., and Ehrhardt.

ATLANTIC COAST LINE.—*Bonds.*—This road has applied to the Interstate Commerce Commission for authority to have certified and delivered into its treasury $1,314,000 of its 4½ per cent general unified mortgage bonds, series A, which are reserved to provide for the payment of a like amount of first mortgage bonds of the Norfolk & Carolina, and A. C. L. predecessor. The N. & C. bonds have been provided for by an A. C. L. deposit of cash with the trustee, and the new issue is not to be sold or otherwise disposed of at this time.

AVON, GENESEO & MOUNT MORRIS.—*Abandonment.*—This road has applied to the Interstate Commerce Commission for authority to abandon its entire line extending from Avon, N. Y., to Sonyea, 17.8 miles. The Erie, which has been operating the line since 1872, recently served notice of its intention to disaffirm the lease.

CENTRAL VERMONT.—*Abandonment.*—This road has been authorized by the Interstate Commerce Commission, Division 4, to abandon a 3.88-mile branch line extending from South Barre, Vt., to Williamstown.

CHICAGO & NORTH WESTERN.—*Equipment certificates.*—The Chicago & North Western has been granted authority by the federal district court to sell $3,000,000 of equipment trust certificates, maturing serially over a ten-year period and bearing interest at 3 per cent. The certificates will be guaranteed as to principal and interest by the trustee.

CHICAGO, BURLINGTON & QUINCY.—*New Director.*—James C. James, general counsel of the Burlington, has been elected a director, succeeding Bruce C. Scott, deceased.

CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC.—*Promissory Note.*—Upon surrender for cancellation of a note issued without its authorization, the Interstate Commerce Commission, Division 4, has authorized trustees of this road to issue a two per cent promissory note in the face amount of $1,184,000 to be delivered to the Continental Illinois National Bank & Trust Company to evidence a loan made in connection with the payment of certain taxes.

CHICAGO, ROCK ISLAND & PACIFIC.—*Certificates of Indebtedness.*—Trustees of this road have applied to the Interstate Commerce Commission for authority to issue $4,500,000 of two-year three per cent certificates of indebtedness in connection with the extension or renewal of bank loans now evidenced by 3½ per cent certificates due June 1. The loans involved include one of $4,300,000 from the First National Bank of Chicago, and one of $200,000 from the Mississippi Valley Trust Company of St. Louis, Mo.

CHICAGO, BURLINGTON & QUINCY.—*Annual Report.*—The 1938 annual report of this road shows net income, after interest and other charges, of $3,641,762, a decrease of $1,265,492 as compared with net income in 1937. Selected items from the income statement follow:

	1938	Increase or Decrease Compared with 1937
RAILWAY OPERATING REVENUES	$93,070,136	−$7,081,075
Maintenance of way	11,654,202	−2,379,788
Maintenance of equipment	15,409,733	−1,865,546
Transportation	33,620,007	−2,563,409
TOTAL OPERATING EXPENSES	67,087,220	**−7,190,784**
Operating ratio	72.08	−2.09
NET REVENUE FROM OPERATIONS	25,982,915	+109,708
Railway tax accruals	9,061,509	+1,330,044
Railway operating income	16,921,406	−1,220,335
Hire of equipment—Net Dr.	2,497,983	−241,076
Joint facility rents—Net Dr.	2,016,031	−60,155
NET RAILWAY OPERATING INCOME	12,407,392	−919,104
Other income	1,095,816	−259,046
TOTAL INCOME	13,503,208	−1,178,150
Rent for leased roads	89,734	−55,387
Interest on funded debt	9,412,657	+93,763
TOTAL FIXED CHARGES	9,763,988	+80,387
NET INCOME	$3,641,762	−$1,265,492

CINCINNATI UNION TERMINAL.—*Change in Directors.*—United States Senator Robert A. Taft has resigned as a director and has been succeeded by former congressman John B. Hollister, a law partner of Senator Taft.

CLINTON, DAVENPORT & MUSCATINE.—*Abandonment.*—This road has applied to the Interstate Commerce Commission for authority to abandon its 35.9-mile electric line between Davenport, Iowa, and Clinton.

COPPER RIVER & NORTHWESTERN.—*Abandonment.*—This road, a wholly-owned subsidiary of the Kennecott Copper Corporation, has been authorized by the Interstate Commerce Commission, Division 4, to abandon its entire line extending from Cordova, Alaska, to Kennecott, 195.2 miles.

DENVER & RIO GRANDE WESTERN.—*Abandonment.*—The Interstate Commerce Commission, Division 4, has authorized trustees of this road to abandon a portion of a branch line extending from a point near Colorado City, Colo., to Manitou, 2.6 miles.

JACKSONVILLE TERMINAL.—*Bonds.*—This company has applied to the Interstate Commerce Commission for authority to issue and sell $400,000 of 4½ per cent refunding and extension mortgage bonds, series C, to refund a like amount of first mortgage five per cent bonds which mature July 1. It is proposed to sell the new issue, which would mature July 1, 1967, to Granbery, Marache & Lord at a price of 100¾ plus accrued interest. Also, the bonds would be guaranteed by the applicants proprietory lines—the Atlantic Coast Line, Florida East Coast, Seaboard Air Line and Southern, each of which filed a separate application for authority to execute such guarantee.

KANSAS CITY SOUTHERN.—*Acquisition of Louisiana & Arkansas.*—The Interstate Commerce Commission has conditionally authorized this road to acquire control of the Louisiana & Arkansas through purchase of stock, and to issue in connection with the transaction not exceeding 510,000 shares of common stock without par value and 40,000 escrow receipts dated September 12, 1938. The condition attached to that section of the order authorizing the acquisition is to the effect that existing routes shall be kept open until otherwise authorized by the commission; while the stock and escrow receipt issues were authorized on condition that the applicant "procure a requisite amendment of its charter." The report reveals that the Railway Labor Executives' Association intervened, but was satisfied when the K. C. S. and the L. & A. became parties to the so-called Washington Agreement for the protection of employees displaced by consolidations and co-ordinations. An accompanying report in No. 12964, Consolidation of Railroads, modifies the commission's consolidation plan so as to transfer the K. C. S. from System No. 15, Union Pacific, to System No. 19, Rock Island-Frisco, to which the L. & A. and the Louisiana, Arkansas & Texas are now assigned. As noted in the *Railway Age* of April 22, page 715, the merger of the latter into the L. & A. was recently authorized by the commission.

MIDLAND VALLEY.—*Bonds.*—This company has been granted authority by Division 4 of the Interstate Commerce Commission to extend from April 1, 1953 to April 1, 1963, the date of maturity of $1,552,500 of adjustment mortgage five per cent 40-year gold bonds, series A, and $879,000 of adjustment mortgage five per cent 40-year gold bonds, series B. The commission dismissed that part of the application which requested authority to execute a proposed supplemental indenture and an extension agreement.

MINNEAPOLIS & ST. LOUIS.—*Protective Committee.*—The Interstate Commerce Commission, Division 4, has conditionally authorized George E. Roosevelt, R. G. Page and Philip N. Cristal to serve as a protective committee for holders of Iowa Central Railway Company first mortgage five per cent gold bonds.

MINNEAPOLIS, ST. PAUL & SAULT STE. MARIE.—*Abandonment.*—This road and the Wisconsin Central have applied to the Interstate Commerce Commission for authority respectively to abandon operation and to abandon an 11.46-mile line between Cylon, Wisc., and Glenwood City.

MINNEAPOLIS, ST. PAUL & SAULT STE. MARIE.—*Abandonment.*—This road and the

(*Continued on page 804*)

UNION PACIFIC RAILROAD COMPANY

Forty-Second Annual Report—Year Ended December 31, 1938

TO THE STOCKHOLDERS OF UNION PACIFIC RAILROAD COMPANY:

The Board of Directors submits the following report for the year ended December 31, 1938, of the operations and affairs of the Union Pacific Railroad Company, including lines leased from Oregon Short Line Railroad Company, Oregon-Washington Railroad & Navigation Company, Los Angeles & Salt Lake Railroad Company and The St. Joseph and Grand Island Railway Company. The lessor companies have certain income and charges, and the figures in the Income Account, other than those relating to transportation operations, and in the Profit and Loss Account and General Balance Sheet and tabulations and tables relating thereto are stated on a consolidated basis, *excluding offsetting accounts between the companies except as otherwise noted.*

Income

The operated mileage at close of year and income for the year 1938, compared with 1937, were as follows:

	1938	1937	INCREASE	DECREASE
Operated Mileage at Close of Year				
Miles of road	9,903.86	9,911.69	.....	7.83
Miles of additional main tracks	1,542.52	1,542.71	.....	.19
Miles of yard tracks and sidings	4,270.88	4,282.84	.....	11.96
Total Mileage Operated	15,717.26	15,737.24	.....	19.98
Transportation Operations				
Operating revenues	$150,213,214.05	$162,064,310.60	.....	$11,851,096.55
Operating expenses	105,731,151.07	116,834,578.21	.....	11,103,427.14
Revenues over expenses	$44,482,062.98	$45,229,732.39	.....	$747,669.41
Taxes	15,293,994.56	13,244,160.11	$2,049,834.45	
Railway Operating Income	$29,188,068.42	$31,985,572.28	.....	$2,797,503.86
Rents from use of joint tracks, yards, and terminal facilities	1,742,834.54	1,732,739.70	$10,094.84	
	$30,930,902.96	$33,718,311.98	.....	$2,787,409.02
Hire of equipment—debit balance	$8,644,167.12	$8,562,894.10	$81,273.02	
Rents for use of joint tracks, yards, and terminal facilities	2,419,344.40	2,269,157.65	150,186.75	
	$11,063,511.52	$10,832,051.75	$231,459.77	
Net Income from Transportation Operations	**$19,867,391.44**	**$22,886,260.23**	.....	**$3,018,868.79**
Income from Investments and Sources other than Transportation Operations				
Income from oil operations in Southern California—net	$4,713,899.76	$428,521.24	$4,285,378.52	
Dividends on stocks owned	4,506,670.55	4,228,302.62	278,367.93	
Interest on bonds, notes, and equipment trust certificates owned	3,300,297.22	3,765,484.99	.....	$465,187.77
Interest on loans and open accounts—balance	65,660.73	101,365.80	.....	35,705.07
Rents from lease of load and equipment	223,188.71	228,634.26	.....	5,445.55
Miscellaneous rents	333,970.08	345,811.72	.....	11,841.64
Miscellaneous income	479,657.78	538,291.39	.....	58,633.61
Total	$13,623,344.83	$9,636,412.02	$3,986,932.81	
Total Income	$33,490,736.27	$32,522,672.25	$968,064.02	
Fixed and Other Charges				
Interest on funded debt	$14,263,258.04	$14,188,163.76	$75,094.28	
Miscellaneous rents	28,038.71	28,422.49	.....	$383.78
Miscellaneous charges	498,206.00	650,569.78	.....	152,363.78
Total	$14,789,502.75	$14,867,156.03	.....	$77,653.28
Net Income from All Sources	**$18,701,233.52**	**$17,655,516.22**	**$1,045,717.30**	
DISPOSITION OF NET INCOME				
Dividends on Stock of Union Pacific Railroad Co.:				
Preferred stock:				
2 per cent paid April 1, 1938	$1,990,862.00			
2 per cent paid October 1, 1938	1,990,862.00	$3,981,724.00	$3,981,724.00	
Common stock:				
1½ per cent paid April 1, 1938	$3,334,365.00			
1½ per cent paid July 1, 1938	3,334,365.00			
1½ per cent paid October 1, 1938	3,334,365.00			
1½ per cent payable January 3, 1939	3,334,365.00	13,337,460.00	13,337,460.00	
Total Dividends		$17,319,184.00	$17,319,184.00	
Surplus, Transferred to Profit and Loss		**$1,382,049.52**	**$336,332.22**	**$1,045,717.30**

Expenditures Chargeable to Investment in Road and Equipment

Extensions and Branches	$1,202.27	Credits to Investment in Road and Equipment:	
Additions and Betterments (excluding equipment)	3,842,213.45	Cost of property retired and not replaced	$1,406,514.58
Equipment	7,387,398.08	Cost of equipment retired	6,376,369.67
		Adjustments	650,194.04
		Total Credits	$8,433,078.29
Total Expenditures	$11,230,813.80	Net increase in "Investment in Road and Equipment"	$2,797,735.51

[Advertisement]

Operating Results for Year 1938 Compared with Year 1937

		1938	1937	Increase	Decrease	Per Cent
	Average miles of road operated	9,907.52	9,913.82	.....	6.30	.1
	Operating Revenues					
1.	Freight	$120,429,544.33	$130,685,961.16	.....	$10,256,416.83	7.8
2.	Passenger	16,565,711.46	17,320,897.81	.....	755,186.35	4.4
3.	Mail	5,024,152.29	4,996,449.96	$27,702.33	.....	.6
4.	Express	2,040,974.09	2,112,937.79	.....	71,963.70	3.4
5.	Other passenger-train	2,476,461.67	2,948,967.71	.....	472,506.04	16.0
6.	Switching	1,623,826.49	1,513,613.33	110,213.16	.....	7.3
7.	Water line	5,537.86	13,148.92	.....	7,611.06	57.9
8.	Other	2,047,005.86	2,472,333.92	.....	425,328.06	17.2
9.	Total operating revenues	$150,213,214.05	$162,064,310.60	.....	$11,851,096.55	7.3
	Operating Expenses					
10.	Maintenance of way and structures	$16,354,100.36	$17,725,359.91	.....	$1,371,259.55	7.7
11.	Maintenance of equipment	26,413,538.92	30,309,226.12	.....	3,895,687.20	12.9
12.	Total maintenance	$42,767,639.28	$48,034,586.03	.....	$5,266,946.75	11.0
13.	Traffic	4,244,151.42	4,666,453.43	.....	422,302.01	9.0
14.	Transportation—rail line	50,282,801.33	54,657,836.31	.....	4,375,034.98	8.0
15.	Transportation—water line	8,803.87	10,960.08	.....	2,156.21	19.7
16.	Miscellaneous operations	3,430,967.52	3,625,438.82	.....	194,471.30	5.4
17.	General	5,001,449.85	5,840,263.57	.....	838,813.72	14.4
18.	Transportation for investment—*Credit*	4,662.20	960.03	$3,702.17	.....	385.6
19.	Total operating expenses	$105,731,151.07	$116,834,578.21	.....	$11,103,427.14	9.5
20.	Revenues over expenses	$44,482,062.98	$45,229,732.39	.....	$747,669.41	1.7
	Taxes					
21.	State and county	$9,310,726.66	$9,540,231.90	.....	$229,505.24	2.4
22.	Unemployment insurance	1,900,456.01	1,367,169.05	$533,286.96	.....	39.0
23.	Federal retirement	1,681,707.40	35,792.47	1,645,914.93	.....	—

(*This table continued at top of opposite page*)

General Balance Sheet—Assets

		December 31, 1938	December 31, 1937	Increase	Decrease
	Investments:				
	Road and Equipment	$962,258,960.15	$959,461,224.64	$2,797,735.51	
	Less:				
	Receipts from improvement and equipment fund	$23,823,091.13	$23,823,091.13		
	Appropriations from income and surplus prior to July 1, 1907, credited to this account	13,310,236.52	13,310,236.52		
	Total	$37,133,327.65	$37,133,327.65		
701.	**Investment in road and equipment**	$925,125,632.50	$922,327,896.99	$2,797,735.51	
704.	Deposits in lieu of mortgaged property sold	$363,157.35	$827,555.59	.....	$464,398.24
705.	Miscellaneous physical property	9,529,318.95	7,702,227.73	$1,827,091.22	
	Total	$9,892,476.30	$8,529,783.32	$1,362,692.98	
706.	**Investments in affiliated companies:**				
	Stocks	$20,367,836.91	$20,363,886.91	$3,950.00	
	Bonds, notes, and equipment trust certificates	9,651,437.13	11,710,859.36	.....	$2,059,422.23
	Advances	20,725,936.37	19,527,877.86	1,198,058.51	
	Total	$50,745,210.41	$51,602,624.13	.....	$857,413.72
707.	**Investments in other companies:**				
	Stocks	$80,956,197.19	$81,160,708.06	.....	$204,510.87
	Bonds, notes, and equipment trust certificates	67,735,085.14	65,765,779.95	$1,969,305.19	
	Total	$148,691,282.33	$146,926,488.01	$1,764,794.32	
	United States Government Bonds and Notes	$12,855,780.67	$19,759,318.17	.....	$6,903,537.50
703.	Sinking funds	$350.00	$100,000.00	.....	$99,650.00
	Total Investments	$1,147,310,732.21	$1,149,246,110.62	.....	$1,935,378.41
	Current Assets:				
708.	Cash	$23,447,319.13	$9,739,058.20	$13,708,260.93	
711.	Special deposits	41,877.23	51,045.44	.....	$9,168.21
712.	Loans and bills receivable	8,264.48	6,447.50	1,816.98	
713.	Traffic and car-service balances receivable	3,626,594.25	3,352,663.65	273,930.60	
714.	Net balance receivable from agents and conductors	1,107,061.43	1,024,846.24	82,215.19	
715.	Miscellaneous accounts receivable	5,240,393.14	4,940,042.27	300,350.87	
716.	Material and supplies	21,579,507.44	30,498,241.56	.....	8,918,734.12
717.	Interest and dividends receivable	850,997.53	963,756.92	.....	112,759.39
718.	Rents receivable	120,073.41	114,433.17	5,640.24	
719.	Other current assets:				
	Baltimore and Ohio Railroad Co. capital stock applicable to payment of extra dividend of 1914	113,531.70	113,875.70	.....	344.00
	Miscellaneous items	953.01	1,080.96	.....	127.95
	Total Current Assets	$56,136,572.75	$50,805,491.61	$5,331,081.14	
	Deferred Assets:				
720.	Working fund advances	$380,357.45	$259,598.28	$120,759.17	
722.	Other deferred assets	4,661,540.58	3,947,751.53	713,789.05	
	Total Deferred Assets	$5,041,898.03	$4,207,349.81	$834,548.22	
	Unadjusted Debits:				
723.	Rents and insurance premiums paid in advance	$18,114.26	$20,249.75	.....	$2,135.49
725.	Discount on funded debt	699,910.52	731,604.56	.....	31,694.04
727.	Other unadjusted debits	1,150,593.68	1,232,321.67	.....	81,727.99
	Total Unadjusted Debits	$1,868,618.46	$1,984,175.98	.....	$115,557.52
	Grand Total	$1,210,357,821.45	$1,206,243,128.02	$4,114,693.43	

[Advertisement]

Operating Results for Year Ended 1938 Compared with Year 1937—Continued

	TAXES—(*Continued*)	1938	1937	INCREASE	DECREASE	PER CENT
24.	Federal income	$2,185,313.62	$1,935,018.01	$250,295.61	.....	12.9
25.	Federal capital stock	202,486.00	352,745.00	.....	$150,259.00	42.6
26.	Other federal	13,304.87	13,203.68	101.19	.....	.8
27.	Total taxes	$15,293,994.56	$13,244,160.11	$2,049,834.45	.....	15.5
28.	Railway operating income	$29,188,068.42	$31,985,572.28	.....	$2,797,503.86	8.7
29.	Equipment rents (debit)	8,644,167.12	8,562,894.10	$81,273.02	.....	.9
30.	Joint facility rents (debit)	676,509.86	536,417.95	140,091.91	.....	26.1
31.	Net railway operating income	$19,867,391.44	$22,886,260.23	.....	$3,018,868.79	13.2
	Per cent—Operating expenses of operating revenues	70.39	72.09	.....	1.70	2.4
	FREIGHT TRAFFIC (*Commercial Freight only*)					
	Tons of revenue freight carried	25,284,671	28,609,938	.....	3,325,267	11.6
	Ton-miles, revenue freight	11,713,952,906	13,297,243,583	.....	1,583,290,677	11.9
	Average distance hauled per ton (*miles*)	463.28	464.78	.....	1.50	.3
	Average revenue per ton miles (*cents*)	1.028	.983	0.45	.....	4.6
	Average revenue per freight-train mile	$5.99	$5.67	$.32	.....	5.6
	PASSENGER TRAFFIC (*Excludes Motor Train, other than Streamlined Train*)					
	Revenue passengers carried	1,684,267	2,052,571	.....	368,304	17.9
	Revenue passengers carried one mile	944,680,863	1,072,827,716	.....	128,146,853	11.9
	Average distance hauled per passenger (*miles*)	560.89	522.68	38.21	.....	7.3
	Average passengers per passenger-train mile	73.56	80.02	.....	6.46	8.1
	Average revenue per passenger-mile (*cents*)	1.739	1.600	.139	.....	8.7
	Average revenue per passenger-train mile, passengers only	$1.28	$1.28			
	Average total revenue per passenger-train mile	$1.85	$1.72	$.13	.....	7.6

General Balance Sheet—Liabilities

		December 31, 1938	December 31, 1937	INCREASE	DECREASE
751.	**Capital Stock**				
	Common stock	$222,302,500.00	$222,302,500.00		
	Preferred stock	99,602,980.79	99,602,980.79		
	Total Capital Stock	$321,905,480.79	$321,905,480.79		
755.	**Funded Debt**	353,147,195.00	354,963,010.00	.....	$1,815,815.00
	Total	$675,052,675.79	$676,868,490.79	.....	$1,815,815.00
754.	**Grants in Aid of Construction**	$5,518,354.27	$4,754,683.37	$763,670.90	
757.	**Nonnegotiable Debt to Affiliated Companies**	$6,667,421.98	$5,375,706.75	$1,291,715.23	
	Current Liabilities:				
759.	TRAFFIC AND CAR-SERVICE BALANCES PAYABLE	$1,201,269.18	$1,236,791.98	.....	$35,522.80
760.	AUDITED ACCOUNTS AND WAGES PAYABLE	8,194,858.95	9,588,005.63	.....	1,393,146.68
761.	MISCELLANEOUS ACCOUNTS PAYABLE	912,515.81	804,399.26	$108,116.55	
762.	INTEREST MATURED UNPAID:				
	Coupons matured, but not presented	88,924.61	84,168.31	4,756.30	
	Coupons and interest on registered bonds, due first proximo	4,022,611.20	4,032,140.20	.....	9,529.00
763.	DIVIDENDS MATURED UNPAID:				
	Dividends due but uncalled for	121,304.34	117,034.46	4,269.88	
	Extra dividend on common stock declared January 8, 1914, payable to stockholders of record March 2, 1914, unpaid	122,504.74	122,851.76	.....	347.02
	Dividend on common stock payable third proximo	3,334,365.00	3,334,365.00		
764.	FUNDED DEBT MATURED UNPAID	59,175.00	98,175.00	.....	39,000.00
766.	UNMATURED INTEREST ACCRUED	1,625,738.46	1,636,003.07	.....	10,264.61
767.	UNMATURED RENTS ACCRUED	429,011.09	371,945.03	57,066.06	
768.	OTHER CURRENT LIABILITIES	324,099.40	272,111.09	51,988.31	
	Total Current Liabilities	$20,436,377.78	$21,697,990.79	.....	$1,261,613.01
	Deferred Liabilities:				
770.	OTHER DEFERRED LIABILITIES	$8,189,807.27	$8,043,174.13	$146,633.14	
771.	TAX LIABILITY	8,573,473.16	7,776,109.00	797,364.16	
	Total Deferred Liabilities	$16,763,280.43	$15,819,283.13	$943,997.30	
	Unadjusted Credits:				
772.	PREMIUM ON FUNDED DEBT	$96,559.77	$98,668.87	.....	$2,109.10
773.	INSURANCE RESERVE (Reserve for fire insurance)	8,627,422.95	8,020,482.62	$606,940.33	
	RESERVE FOR DEPRECIATION	114,863,200.96	111,661,138.44	3,202,062.52	
778.	OTHER UNADJUSTED CREDITS:				
	Contingent interest	2,784,968.41	2,179,910.60	605,057.81	
	Miscellaneous items	2,467,170.83	2,844,370.51	.....	377,199.68
	Total Unadjusted Credits	$128,839,322.92	$124,804,571.04	$4,034,751.88	
	Total Liabilities	**$853,277,433.17**	**$849,320,725.87**	**$3,956,707.30**	
	Surplus:				
	APPROPRIATED FOR ADDITIONS AND BETTERMENTS	$30,767,754.54	$30,733,178.01	$34,576.53	
	RESERVED FOR DEPRECIATION OF SECURITIES	34,972,570.88	34,972,570.88		
	FUNDED DEBT RETIRED THROUGH INCOME AND SURPLUS	992,228.66	667,788.66	324,440.00	
	SINKING FUND RESERVES	350.00	100,000.00	.....	$99,650.00
	Total Appropriated Surplus	$66,732,904.08	$66,473,537.55	$259,366.53	
784.	**Profit and Loss—Credit Balance**	**250,782,284.46**	**250,883,664.86**	.....	$101,380.40
	Total Surplus	$317,515,188.54	$317,357,202.41	$157,986.13	
	As this consolidated balance sheet excludes all intercompany items, securities of the Los Angeles & Salt Lake Railroad Company and The St. Joseph and Grand Island Railway Company owned by other System companies are not included. The difference between the par and face value of such securities as carried on the books of the issuing companies (less unextinguished discount on the bonds and discount charged to Profit and Loss but added back in consolidating the accounts) and the amounts at which the securities are carried on the books of the owning companies is set up here to balance	$39,565,199.74	$39,565,199.74		
	Grand Total	**$1,210,357,821.45**	**$1,206,243,128.02**	**$4,114,693.43**	

[Advertisement]

Financial News

(*Continued from page 800*)

Minnesota Northwestern Electric have applied to the Interstate Commerce Commission for authority to abandon an 18.67-mile line between Thief River Falls, Minn., and Goodridge, which the Minnesota has been operating under a lease agreement with the Soo.

MISSOURI-KANSAS-TEXAS.—*Annual Report.*—The 1938 annual report of this company shows net deficit, after interest and other charges, of $3,849,166, an increase of $2,223,688 over net deficit for 1937. Selected items from the consolidated income account follow:

	1938	Increase or Decrease Compared with 1937
Average Mileage Operated	3,293.91	.....
RAILWAY OPERATING REVENUES	$27,857,730	−$4,262,585
Maintenance of way	3,959,431	−190,936
Maintenance of equipment	4,509,124	−625,634
Transportation	11,041,360	−593,026
TOTAL OPERATING EXPENSES	22,403,980	−1,703,119
Operating ratio	80.42	+5.37
NET REVENUE FROM OPERATIONS	5,453,749	−2,559,466
Railway tax accruals	2,396,313	+17,278
Railway operating income	3,057,435	−2,576,744
Net rents—Dr.	2,191,699	−479,783
NET RAILWAY OPERATING INCOME	865,736	−2,096,960
Other income	324,329	−57,528
TOTAL INCOME	1,190,066	−2,154,489
Rent for leased roads and equipment	20,003	−2,372
Interest on funded debt	4,249,685	+69,155
TOTAL FIXED CHARGES	4,290,457	+70,246
NET DEFICIT	$3,849,166	+$2,223,688

NEW YORK, CHICAGO & ST. LOUIS.—*New Directors.*—Earl Baile, John L. Dickinson, Ralph C. Gifford and John M. Miller have been elected directors of the Nickel Plate to fill vacancies on the board and Walter S. McLucas has been elected a director, to succeed Walter L. Ross, deceased.

NEW YORK, NEW HAVEN & HARTFORD.—*Court Disallows Expenditures.*—The U. S. district court at New Haven, Conn., has characterized as "inadvisable at this time" a petition of this road to spend $107,400 for new equipment for the Boston & Providence, a leased line. Both roads are in the process of reorganization and the court suggested that the trustees of the leased line might raise the needed funds in some other manner. The court direction was given without prejudice to renewal of the petition when the roads' affairs are less involved.

PENNSYLVANIA. — *Holding Company Notice.*—The Pennroad Corporation of Wilmington, Delaware, has issued a notice of termination of its voting trust agreement on May 1, 1939. Pursuant to the terms of the agreement, certificates for shares of common stock of the corporation ($1 par value) will be delivered on and after the expiration date to owners of voting trust certificates upon surrender.

PERE MARQUETTE.—*Three new directors.*—Three new directors, Frank B. Bernard, Muncie, Ind.; Homer L. Ferguson, Newport News, Va.; and John B. Hollister, Cincinnati, Ohio, were elected at the annual stockholders meeting at Detroit, Mich., on May 2. They succeed Michael Gallagher and William H. Wenneman, both of Cleveland, Ohio, and Seward L. Merriam, Detroit.

PITTSBURGH & WEST VIRGINIA.—*Equipment Trust Applications Withdrawn.*—In response to this road's request, the Interstate Commerce Commission, Division 4, has dismissed applications filed December 27, 1938, for authority to assume liability for $1,500,000 of equipment trust certificates and for I. C. C. approval of Reconstruction Finance Corporation aid in financing the sale of such certificates.

ST. LOUIS SOUTHWESTERN. — *Interest Payment.*—The St. Louis Southwestern has been authorized by the federal district court to pay $400,000 in semi-annual interest due May 1 on the road's first mortgage bond certificates.

UINTAH.—*Abandonment.*—This company has been authorized by Division 4 of the Interstate Commerce Commission to abandon its entire line extending from a connection with the Denver & Rio Grande Western at Mack, Colo., to Watson, Utah, 63.1 miles, with branches extending from Dragon, Utah to Dragon Mine 1.1 miles, and from Rainbow Junction, Utah, to Rainbow, 4.2 miles.

WABASH.—*Equipment Trust Refinancing.*—Receivers of this road have been authorized by the United States District Court at St. Louis, Mo., to enter into an agreement with the Reconstruction Finance Corporation under which the latter will use or make available to the receivers funds for the purchase at par of the outstanding equipment trust obligations of the road. The Interstate Commerce Commission and the Reconstruction Finance Corporation have approved such financing and the receivers announce that they are now in a position to acquire the following outstanding equipment trust obligations:

Issue	Matured	Unmatured	Total
6 P. C. Notes of 1920	$755,400	.....	$755,400
5 P. C. of 1922.	566,000	.....	566,000
5½ P. C., Series C	402,000	.....	402,000
5 P. C., Series D	498,000	.....	498,000
5 P. C., Series E	513,000	$171,000	684,000
4½ P. C., Series F	837,000	558,000	1,395,000
4½ P. C., Series G	700,000	525,000	1,225,000
4½ P. C., Series H	900,000	1,125,000	2,025,000
Total	$5,171,400	$2,379,000	$7,550,400

Holders of obligations both matured and unmatured will receive payment at par and accrued interest to May 1, 1939.

Average Prices of Stocks and Bonds

	May 2	Last week	Last year
Average price of 20 representative railway stocks..	27.10	26.57	22.78
Average price of 20 representative railway bonds..	57.34	57.91	55.24

Dividends Declared

Richmond, Fredericksburg & Potomac.—7 Per Cent Guaranteed, $3.50, semi-annually; 6 Per Cent Guaranteed, $3.00, semi-annually, both payable May 1 to holders of record April 29.

Railway Officers

EXECUTIVE

James C. James, general counsel of the Chicago, Burlington & Quincy, with headquarters at Chicago, has been elected also a vice-president of the Burlington. A photograph and biography of Mr. James were published on page 688 of the *Railway Age* of November 5, at the time of his promotion to general counsel.

C. S. Millard, vice-president and chief operating officer of the Cincinnati Union Terminal, Cincinnati, Ohio, has been elected president, succeeding **C. W. Galloway.** Mr. Millard is vice-president and general manager of the Cleveland, Cincinnati, Chicago & St. Louis (Big Four) and Mr. Galloway is vice-president of the Baltimore & Ohio.

Charles M. Kimball has been appointed executive representative of the Southern, with headquarters at Washington, D. C., reporting to the vice-president in charge of operations, and will perform such duties as may be assigned, assist in the direction of the activities of employee co-operation in matters of mutual interest and in the effort to keep the public informed respecting the railroad problem.

J. E. Crawford, vice-president in charge of operation of the Norfolk & Western, with headquarters at Roanoke, Va., has been appointed vice-president—assistant to president. **R. H. Smith,** general manager, has been appointed vice-president and general manager in charge of the operating department, with headquarters at Roanoke. Mr. Crawford was born in San Diego, Cal., on December 1, 1876, and was educated at the University of Pennsylvania. He entered the service of the Pencoyd Iron Works in 1895 as a draftsman and was later promoted to designer in the same organization. In July, 1903, Mr. Crawford entered the service of the Norfolk & Western as bridge engineer, remaining in that capacity until May, 1913, when he was promoted to chief engineer. He was appointed assistant general

J. E. Crawford

manager in February, 1923, and in the following year became general manager. He was appointed vice-president in charge of operation on December 1, 1936, the position he has held since.

Mr. Smith was born in Baltimore, Md., on March 10, 1888, and was educated at Princeton University, from which he was graduated in 1911 with a degree in civil engineering. He entered the service of the Norfolk & Western on July 1, 1910, as an axeman in the engineering department at Roanoke, during a summer vacation while attending college. He re-entered the service of the N. & W. in June of the following year as masonry inspector in the same department and on February 1,

R. H. Smith

1912, was appointed transitman. On June 1, 1913, he was promoted to assistant roadmaster of the Radford division at Pulaski, Va., and Roanoke. On October 15, 1914, Mr. Smith was advanced to roadmaster of the same division and in June, 1917, he was appointed assistant superintendent of the Pocahontas division. In October, 1919, he was transferred to the Radford division in the same capacity, being promoted to the position of superintendent of the Radford division on December 26, 1922. Mr. Smith became general superintendent of the Eastern General division in 1931, and subsequently became general superintendent of the Western General division. He was appointed general manager in December, 1936.

FINANCIAL, LEGAL AND ACCOUNTING

Walter N. Davis, attorney for the Terminal Railroad Association of St. Louis, with headquarters at St. Louis, Mo., has been promoted to general attorney with the same headquarters, replacing **Joseph L. Howell,** whose death on April 7 was announced in the *Railway Age of* April 15.

OPERATING

L. B. Clary, superintendent of the Southern division of the St. Louis-San Francisco, with headquarters at Memphis, Tenn., has been transferred to the Southwestern division, with headquarters at Tulsa, Okla., succeeding **C. T. Mason,** who retired on May 1. **J. A. Moran,** superintendent of the Northern division with headquarters at Fort Scott, Kan., has been transferred to Memphis, replacing Mr. Clary and **H. W. Hale,** special representative of the general manager at Springfield, Mo., has been appointed superintendent at Ft. Scott relieving Mr. Moran.

A. H. Johnson, telegraph and telephone engineer of the Southern, with headquarters at Washington, D. C., has been promoted to superintendent of telegraph and telephone, with headquarters at Cincinnati, succeeding **W. S. Melton,** who retired on May 1.

Thomas F. Williams, assistant superintendent of the Bessemer & Lake Erie, with headquarters at Greenville, Pa., has retired from the service of that company. **Willis L. Morneweck,** trainmaster, has been appointed assistant superintendent at Greenville.

R. A. Hendrie, telegraph and telephone engineer of the Missouri Pacific, with headquarters at St. Louis, Mo., has been promoted to assistant superintendent of telegraph, with the same headquarters, succeeding **David T. G. Smith,** whose death on April 17, was announced in the *Railway Age* of April 29.

J. C. Albright, assistant superintendent on the Union Pacific, with headquarters at Portland, Ore., has been promoted to superintendent, with headquarters at Spokane, Wash., succeeding **P. T. McCarthy** and **A. L. Tenner,** trainmaster at Hood River, Ore., has been advanced to assistant superintendent at Portland, succeeding Mr. Albright.

A. A. Lampert, auditor of the Missouri & Illinois Bridge & Belt, with headquarters at Alton, Ill., has been promoted to superintendent-auditor, succeeding to the duties of **William T. Loudon,** whose retirement on May 1 was announced in the *Railway Age* of April 22. Mr. Lampert entered railway service as a yard clerk for the Big Four at Alton, and was later transferred to the local freight office at East St. Louis, Ill. He later served successively the Chicago, Burlington & Quincy as assistant city ticket agent at St. Louis, Mo., and the Missouri Pacific as chief clerk in the general yardmaster's office at Bixby, Ill. In 1905, he went with the Missouri & Illinois Bridge & Belt and in 1918 he was promoted to auditor.

Henry J. Roth, whose retirement as superintendent on the Illinois Central, with headquarters at Clinton, Ill., on March 31, was announced in the *Railway Age* of April 8, was born at Fairfield, Iowa, on October 21, 1870, and entered railway service as a telegraph operator on the Union Pacific in 1886, later serving consecutively as station agent, dispatcher, trainmaster and assistant superintendent. In 1890, he went with the Northern Pacific as a train dispatcher and two years later he returned to the Union Pacific as a trainmaster, later being promoted to assistant superintendent. In 1912, he went with the Illinois Central as an inspector of transportation and was later promoted to trainmaster with headquarters at Carbondale, Ill. Mr. Roth was advanced to superintendent, with headquarters at Mattoon, Ill., in the spring of 1917. He was later transferred to Carbondale, Ill., and Clinton, Ill.

John W. Rea, whose retirement on May 1 as general superintendent of the Western district of the Missouri Pacific, with headquarters at Kansas City, Mo., was announced in the *Railway Age* of April 29, was born at Wesson, Miss., on April 9, 1879, and entered railway service in January, 1905, as a brakeman on the Illinois Central. The next year he became a conductor on the Yazoo & Mississippi Valley (now a part of the Illinois Central), and in October, 1907, he was advanced to engine foreman and yardmaster. Mr. Rea served from September, 1911, to November, 1915, as a freight conductor on the Illinois Central and he was then promoted to trainmaster on the Memphis division, where he remained until November, 1923, when he was appointed inspector of transportation on the Missouri Pacific at St. Louis, Mo. In January, 1924, he was appointed acting superintendent of the Eastern division, with headquarters at Jefferson City, Mo., and in May of the same year he was promoted to superintendent. Mr. Rea was advanced to general superintendent of the Eastern district on September 1, 1928. He was later appointed successively executive assistant, with headquarters at Little Rock, Ark., and superintendent of the Arkansas division, with the same headquarters. In June, 1935, he was promoted to general superintendent of the Western district, with headquarters at Kansas City.

F. A. Bogue, general superintendent of the Chicago, Rock Island & Gulf, (Rock Island lines in Texas) with headquarters at Ft. Worth, Tex., has been appointed superintendent of safety, with headquarters at Chicago, succeeding **L. F. Shedd,** whose retirement on March 31, was announced in the *Railway Age* of April 8. **C. B. Pratt,** division superintendent, with headquarters at Little Rock, Ark., has been transferred to Ft. Worth, replacing Mr. Bogue and **H. T. Livingston,** district maintenance engineer, with headquarters at El Reno, Okla., has been promoted to superintendent at Little Rock, relieving Mr. Pratt.

George S. West, general superintendent of the Southwestern division of the Pennsylvania, with headquarters at Indianapolis, Ind., has been transferred in the same capacity to Williamsport, Pa., replacing **H. H. Garrigues,** whose promotion to chief engineer maintenance of way of the Eastern region is announced elsewhere in these columns, and **Paul E. Feucht,** superintendent of passenger transportation, Eastern region, with headquarters at Philadelphia, has been advanced to general superintendent at Indianapolis, relieving Mr. West. **H. L. Nancarrow,** superintendent of the Buffalo division, with headquarters at Buffalo, N. Y., has been promoted to superintendent of passenger transportation, Eastern region, succeeding Mr. Feucht and **J. S. Gillum,** superintendent of the Monongahela divi-

sion, with headquarters at Pittsburgh, Pa., has been transferred to Buffalo, replacing Mr. Nancarrow. **W. P. Neff,** trainmaster of the Columbus division, at Columbus,

Paul E. Feucht

Ohio, has been promoted to superintendent of the Monongahela division, relieving Mr. Gillum.

Mr. Feucht was born at Indianapolis, Ind., on January 4, 1900. He received his early education in that city and completed his college education at Purdue University. Mr. Feucht entered the service of the Pennsylvania on March 1, 1923, as an assistant on the engineering corps of the Louisville division and in May, 1925, he was transferred to the Indianapolis division. In January, 1927, he was promoted to assistant track supervisor and assigned to the Philadelphia Terminal division, and in September, 1928, he was transferred to Tyrone, Pa. Mr. Feucht was advanced to supervisor at Norristown, Pa., in January, 1929, and a year later he was transferred to the main line at Tyrone. For a few months in 1933, he was relieved of his track work and assigned to special duty in the motor service and upon the comple-

H. L. Nancarrow

tion of this work in July, 1933, he was promoted to division engineer of the Renovo division. In October, 1934, he was transferred to the Fort Wayne division. Mr. Feucht was advanced to superintendent of the Wilkes-Barre division on April 1, 1935, and on May 1, 1936, he was appointed superintendent of passenger transportation of the Eastern region. His promotion to general superintendent was effective May 1.

Mr. Nancarrow was born at Jersey Shore, Pa., in 1897, and was graduated in engineering from Bucknell University. He entered the service of the Pennsylvania on October 7, 1920, as a draftsman in the office of the superintendent of motive power at Philadelphia, Pa. On March 14, 1921, he was appointed a special apprentice at the Altoona (Pa.) machine shops, and on April 17, 1924, became inspector of motive power there. On September 1, 1924, he became gang foreman on the Cleveland and Pittsburgh division and on February 10, 1926, he was advanced to assistant engine-house foreman. Mr. Nancarrow was transferred to the Akron division as assistant master mechanic on March 1, 1927, and on May 16, 1928, he was promoted to master mechanic of the Erie and Ashtabula division. On January 1, 1929, he was transferred in the same capacity to the Baltimore division and then to the Philadelphia Terminal division, where he remained until October, 1936, when he was appointed superintendent of the Logansport division, at Logansport, Ind. In January, 1938, Mr. Nancarrow was transferred in the same capacity to the Buffalo division, at Buffalo, N. Y., the position he held until his recent appointment as superintendent of passenger transportation of the Eastern region at Philadelphia.

TRAFFIC

Willard F. Knobeloch has been elected chairman of the Southwestern Freight Bureau at St. Louis, Mo., to succeed **F. A. Leland,** who will retire on June 1, after 31 years of service in that position.

A. P. Hickcox, assistant freight claim agent of the Pennsylvania, with headquarters at Philadelphia, Pa., has been appointed freight claim agent, with the same headquarters, succeeding **H. J. Freeman,** who retired on April 30.

H. S. Lewis, livestock agent of the New York, Chicago & St. Louis, with headquarters at Cleveland, Ohio, has been promoted to general livestock agent, with the same headquarters, succeeding **F. S. Olds,** who retired on May 1.

William J. Ford, general agent on the Chicago, Rock Island & Pacific at New Orleans, La., has been promoted to general freight agent, with headquarters at Chicago, replacing **Joseph Merrow, Jr.,** whose death on March 27 was announced in the *Railway Age* of April 1.

G. A. Staples, district freight agent of the Canadian Pacific, with headquarters at Edmonton, Alta., has been appointed division freight agent at Calgary, Alta., succeeding **R. W. Drew,** who has retired on pension after 43 years of service. **C. A. Steward,** city freight agent, Calgary, has been appointed district freight agent at Edmonton, succeeding Mr. Staples. **Robert Niven,** assistant district passenger agent, has been appointed general agent, passenger department, for the Ontario district, with headquarters as before at Toronto, Ont.

O. L. Strieby, division freight and passenger agent on the Missouri Pacific, with headquarters at Pueblo, Colo., has been promoted to assistant general freight and passenger agent at Denver, Colo., a newly created position, and **C. M. Entrekin,** commercial agent at Grand Junction, Colo., has been appointed general agent, with the same headquarters, a change in title.

R. L. Crusen, traveling freight and passenger agent for the Wabash at Seattle, Wash., has been promoted to general agent, freight department, at Peoria, Ill., succeeding **C. T. Chapman,** who retired on May 1, and **Jerome F. Hart,** district passenger agent at New York, has been appointed general agent, passenger department at that point, a change in title.

L. C. Smith, general agent, freight department, at Detroit, Mich., for the Duluth, South Shore & Atlantic and the Mineral Range, has been promoted to assistant general freight agent, with headquarters at Marquette, Mich. **W. H. Hawes,** assistant traffic manager, with headquarters at Marquette, Mich., has been appointed general agent at Detroit, and the position of assistant traffic manager at Marquette has been abolished.

The title of **C. M. Lyon,** general baggage, express and milk traffic agent of the Delaware, Lackawanna & Western, with headquarters at Hoboken, N. J., has been changed to general baggage and milk traffic agent, effective May 1. The handling of matters pertaining to express traffic has been transferred to the operating department, under the jurisdiction of **Henry Foulkes,** who has been appointed superintendent, mail and express traffic, with headquarters as before at New York. The position of superintendent mail transportation, formerly held by Mr. Foulkes, has been discontinued.

Dudley L. Thornbury, general agent for the Atchison, Topeka & Santa Fe, at Philadelphia, Pa., has been promoted to assistant traffic manager, with headquarters at Detroit, Mich., a newly created position, and **Joseph E. Walsh,** traveling freight agent at Philadelphia, has been advanced to general agent at that point, succeeding Mr. Thornbury. **John C. Batham,** general agent at Minneapolis, Minn., has been transferred to Washington, D. C., where he will have charge of a newly opened traffic office, and **Matthew A. Murphy,** traveling freight agent at Boston, Mass., has been promoted to general agent at Minneapolis, replacing Mr. Batham.

William J. Wilkins, whose promotion to assistant freight traffic manager on the Southern, with headquarters at Memphis, Tenn., was announced in the *Railway Age* of April 8, was born at Roanoke, Va., on October 22, 1898, and attended college for three years in New York. He entered railway service on February 17, 1926, as a clerk on the Southern at Washington,

Continued on next left-hand page

Rod assembly jigs at LIMA insure absolute accuracy of rods

Lima Locomotives

LOWER MAINTENANCE EXPENSE

Satisfactory locomotives must conserve maintenance as well as produce ton-miles. The rigid manufacturing specifications that all Lima-built power must meet result in locomotives that conserve maintenance expenses. *** Typical of the care and accuracy with which Lima power is constructed, is the rod assembly jig illustrated above. The machined rods must fit on these jigs thus insuring interchangeability and avoiding the necessity of adjustment when the rods are applied to locomotives. This care in rod manufacture is one of the reasons why Lima-built locomotives "break-in" easily.**

LIMA LOCOMOTIVE WORKS, LIMA LOCOMOTIVE WORKS INCORPORATED INCORPORATED, LIMA, OHIO

D. C., and on January 1, 1927, he was promoted to rate clerk. On November 15, 1927, he was promoted to freight traffic representative at New York. Three years later he was advanced to commercial agent and on May 15, 1933, he was promoted to district freight and passenger agent. Mr. Wilkins was transferred to St. Louis, Mo., on July 1, 1936, and on February 1, 1938, he was advanced to division freight and passenger agent at that point. His promotion to assistant freight traffic manager at Memphis was effective on April 1.

F. S. Baird and **C. F. Keeley,** assistant general freight agents of the Norfolk & Western, with headquarters at Roanoke, Va., have been appointed assistant freight traffic managers, with the same headquarters. **H. D. Wilkerson,** assistant general freight agent at Columbus, Ohio, has been appointed general freight agent, with the same headquarters. **E. M. Dudley,** general western freight agent at Chicago, has been appointed general freight agent in charge of solicitation in Western territory, with headquarters at Roanoke and **S. S. Hosp,** general agent at Pittsburgh, Pa., has been appointed general freight agent in charge of solicitation in Eastern territory, at Roanoke. **J. R. Cutright,** commerce agent at Roanoke, has been appointed assistant general freight agent at Roanoke, a newly-created position. The position of assistant general freight agent at Columbus, Ohio, heretofore held by Mr. Wilkerson, has been abolished. **Edward J. Merkel,** commercial agent at Louisville, Ky., has been promoted to general western freight agent, with headquarters at Chicago, succeeding Mr. Dudley. **R. F. Dickson,** commercial agent at Birmingham, Ala., has been appointed general agent at Pittsburgh.

ENGINEERING AND SIGNALING

W. A. Gunderson, roadmaster on the Chicago, Rock Island & Pacific, with headquarters at Pratt, Kan., has been promoted to district maintenance engineer, with headquarters at Kansas City, Mo., succeeding **Mason W. Rector,** who has been transferred to El Reno, Okla., replacing **H. T. Livingston,** whose promotion to superintendent, with headquarters at Little Rock, Ark., is announced elsewhere in these columns.

W. T. Covert, chief engineer of maintenance of way of the Eastern region of the Pennsylvania, with headquarters at Philadelphia, Pa., has been promoted to assistant chief engineer of the system, with the same headquarters, a newly created position, and **H. H. Garrigues,** general superintendent of the Central Pennsylvania division, with headquarters at Williamsport, Pa., has been promoted to chief engineer of maintenance of way of the Eastern region, succeeding Mr. Covert.

MECHANICAL

L. E. Lonergan, assistant master mechanic on the Southern Pacific at Roseville, Cal., has been promoted to master mechanic of the Sacramento division, with headquarters at Sacramento, Cal., succeeding **H. J. McCracken,** whose death on April 16, is announced elsewhere in these columns. **F. E. Russell, Jr.,** foreman of machinists at Roseville, has been advanced to assistant master mechanic at that point, replacing Mr. Lonergan.

Edwin F. Richardson, assistant engineer motive power of the Bessemer & Lake Erie, has been appointed assistant superintendent motive power, with headquarters as before at Greenville, Pa.

PURCHASES AND STORES

A. W. White, engineer of track of the Chesapeake & Ohio, with headquarters at Richmond, Va., has been promoted to general tie and timber agent of the C. & O., the New York, Chicago & St. Louis (Nickel Plate) and the Pere Marquette, with headquarters at Cleveland, Ohio, succeeding **Wallace S. King,** whose death on April 14 was announced in the *Railway Age* of April 29.

Walter R. Owen, assistant purchasing agent of the Chicago, Rock Island & Pacific, with headquarters at Chicago, has been promoted to purchasing agent, with the same headquarters, succeeding **Frank D. Reed,** whose death on April 23, was announced in the *Railway Age* of April 29.

Walter R. Owen

James C. Kirk, general storekeeper, with headquarters at Silvis, Ill., has been advanced to assistant purchasing agent at Chicago, relieving Mr. Owen and **Earl G. Roberts,** traveling storekeeper, with headquarters at Silvis, has been promoted to general storekeeper at that point, replacing Mr. Kirk.

Mr. Owen was born in Lima, Ohio, on February 11, 1881, and attended the Chicago Manual Training School and Lewis Institute. He entered railway service in 1898 as a clerk in the purchasing department of the Rock Island, and in 1906 he was promoted to chief clerk. Mr. Owen was advanced to assistant purchasing agent in 1911.

OBITUARY

Edward L. Copeland, who retired as secretary and treasurer of the Atchison, Topeka & Santa Fe, with headquarters at Topeka, Kan., in 1935, died in that city on April 19. Mr. Copeland was born at Winnebago, Ill., on August 25, 1859, and entered railway service on November 6, 1879, as a clerk in the auditor's office of the Atchison, Topeka & Santa Fe. In 1883, Mr. Copeland was appointed assistant cashier and four years later he was promoted to cashier. On January 3, 1906, he was made secretary and treasurer, which position he held continuously until his retirement, except for a period during the World War, when he served as federal treasurer of the Santa Fe.

W. A. Cotton, mechanical assistant of the Erie, with headquarters at Cleveland, Ohio, died on May 2nd.

H. J. McCracken, master mechanic of the Sacramento division of the Southern Pacific, with headquarters at Sacramento, Cal., died at that point on April 16.

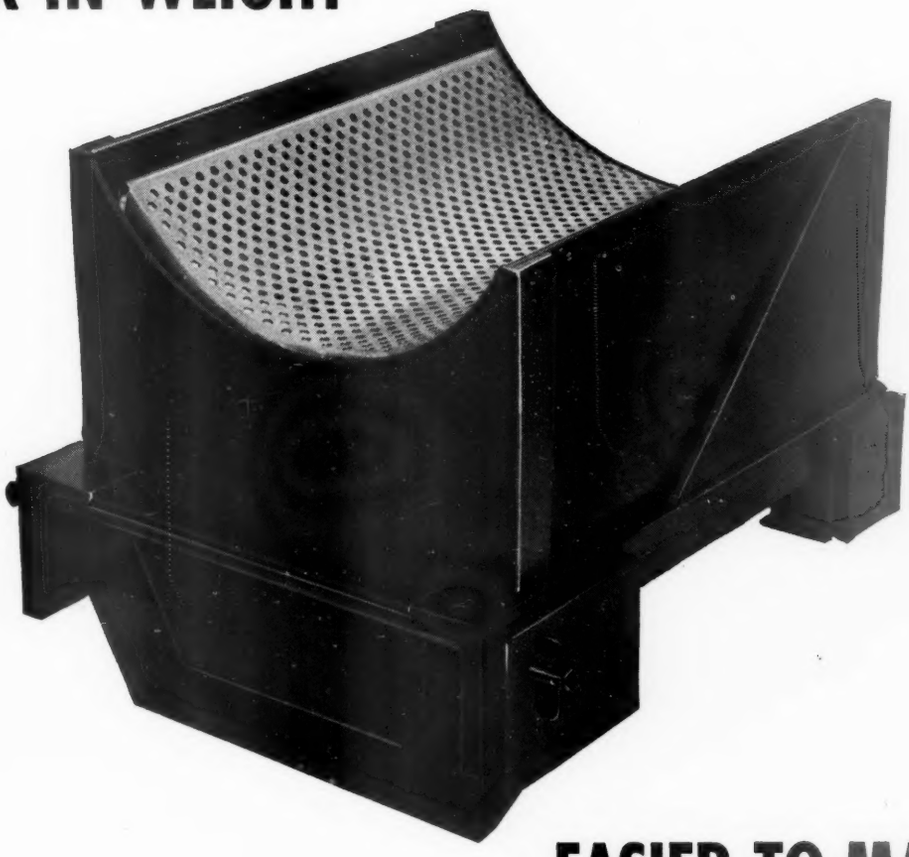
Arthur L. Tucker, who retired in 1926 as assistant general storekeeper on the Chicago & North Western, with headquarters at Chicago, died suddenly of a heart attack on April 17, at Cocoa Beach, Fla.

Joel H. Curtis, superintendent of the Southern division of the Bangor & Aroostook, with headquarters at Bangor, Me., died on April 25, at his home in that city, at the age of 59. Mr. Curtis entered the service of the Bangor & Aroostook as operator at Greenville, Me., in 1900 and went to Bangor in 1904 as train dispatcher, later becoming superintendent of car service. In 1917 he went to Washington in the Car Service division of the American Railway Association, being transferred to Boston in 1918 to handle all the embargoes of New England railroads under the Car Service division. In 1919 he returned to the Bangor & Aroostook as trainmaster of the Northern division, later becoming superintendent of that division. In 1931 he was transferred to Bangor as superintendent of the Southern division, which position he held at the time of his death.

William Hobbs Chadbourn, Jr., former chief engineer of the Chicago Great Western, died of a heart attack at his home at North Egremont, Mass., on April 16. Mr. Hobbs was born at Nashville, Tenn., on October 17, 1865, and graduated in 1886 from the Massachusetts Institute of Technology. He entered railway service shortly thereafter and was later employed in a minor capacity on the construction of the Chicago Great Western. He later served in the engineering departments of the Atlantic Coast Line, and Wilmington Seacoast, and in the engineering corps of the U. S. Army. In the fall of 1906, he was appointed chief engineer of the Chicago Great Western and in November, 1909, he was appointed principal assistant engineer. He left the Great Western a few months later to accept an engineering position in the East. In 1915, he became associated with Herbert Hoover in the administration of American relief work in Belgium and northern France, and later was decorated by King Albert and by the government of France for his work.

Table of Revenues and Expenses Begins on next left-hand page

LIGHTER IN WEIGHT



EASIER TO MAINTAIN

Weight has been reduced by more than half without sacrifice of strength or efficiency in the New Franklin No. 8 Combined Lubricator and Spreader. » » » This fabricated steel unit with reversible cellar and reduced distance between the hub and perforated plate provides better hub lubrication. The improved spreader maintains driving box jaws in parallel and prevents loose crown bearings. A new type of end plate makes a tight fit to exclude dust and other foreign matter. The new cellar permits reversal of tapered grease cakes which now are renewed. This saves labor and reduces the cost of lubrication. » » » For all replacements and new locomotives specify the Franklin No. 8 Lubricator and Spreader

When maintenance is required, a replacement part assumes importance equal to that of the device itself and should be purchased with equal care. Use only genuine Franklin repair parts in Franklin equipment.

FRANKLIN RAILWAY SUPPLY COMPANY, INC.

NEW YORK CHICAGO MONTREAL

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF MARCH AND THREE MONTHS OF CALENDAR YEAR 1939

Name of road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of: Way and structures	Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Operating income	Net railway operating income: 1939	1938
Akron, Canton & Youngstown	March	171	156,904	24	166,907	24,558	18,375	14,052	53,731	119,835	71.8	47,072	32,816	13,924	30
	3 mos.	171	474,685	110	497,203	69,238	53,863	42,074	156,692	348,890	70.2	148,313	105,767	55,370	—28,376
Alton	March	959	925,646	186,802	1,304,900	160,837	195,195	41,686	558,070	1,028,012	78.8	276,888	175,124	9,995	—90,715
	3 mos.	959	2,478,095	605,301	3,615,691	437,204	526,785	124,413	1,597,448	2,894,980	80.1	720,711	424,231	—50,721	—168,153
Atchison, Topeka & Santa Fe System	March	13,466	9,105,903	1,193,973	11,396,160	1,683,656	2,918,140	452,007	4,609,457	10,007,691	87.8	1,388,469	198,918	108,218	—521,377
	3 mos.	13,472	25,879,442	3,757,042	32,682,414	4,508,828	8,440,241	1,346,348	13,391,414	28,784,648	88.1	3,897,766	235,838	—7,668	—2,649,180
Atlanta & West Point	March	93	97,605	22,134	144,702	18,859	25,664	8,563	66,606	130,293	90.0	14,409	4,668	—10,219	—13,878
	3 mos.	93	294,648	67,068	429,512	48,184	77,708	24,499	196,581	377,902	88.0	51,610	22,756	—19,420	—60,939
Western of Alabama	March	133	99,682	21,693	143,387	20,862	28,379	8,583	59,628	124,963	87.2	18,424	4,752	6,538	4,888
	3 mos.	133	286,763	66,434	412,367	53,529	87,895	24,439	169,706	361,452	87.7	50,915	10,175	14,910	—1,012
Atlanta, Birmingham & Coast	March	639	269,161	46,681	339,725	44,782	54,991	24,047	130,904	273,559	80.5	66,165	42,585	7,545	—6,615
	3 mos.	639	790,665	124,008	981,891	132,176	150,415	72,420	373,990	786,084	80.1	195,806	126,360	35,993	—72,981
Atlantic Coast Line	March	5,108	3,566,332	1,071,706	5,200,123	421,453	777,861	162,736	1,800,478	3,387,793	65.1	1,812,330	1,187,330	951,499	910,346
	3 mos.	5,108	9,701,680	2,871,921	14,051,144	1,292,413	2,247,617	524,429	5,151,966	9,878,452	70.3	4,172,692	2,622,692	1,911,690	1,585,541
Charleston & Western Carolina	March	343	213,443	760	219,270	26,018	31,131	8,354	70,046	140,966	64.3	78,304	53,304	48,393	28,389
	3 mos.	343	597,548	2,193	613,349	75,502	83,644	24,479	200,849	401,055	65.4	212,294	137,294	124,055	32,761
Baltimore & Ohio	March	6,405	11,051,496	680,992	12,523,484	978,820	2,776,172	389,942	4,582,069	9,324,217	74.5	3,199,267	2,308,289	2,025,490	420,978
	3 mos.	6,405	30,928,545	2,206,480	35,314,013	2,685,050	7,806,935	1,097,668	13,448,398	26,868,522	76.1	8,445,491	5,807,263	4,956,668	—202,938
Staten Island Rapid Transit	March	24	53,679	75,635	137,809	11,691	21,584	988	85,538	132,586	96.2	5,223	—23,437	—30,592	—32,559
	3 mos.	24	152,154	221,958	399,944	36,264	62,362	3,055	254,799	391,573	97.9	8,371	—77,416	—99,962	—110,091
Bangor & Aroostook	March	603	677,900	16,851	715,170	94,049	100,260	5,781	157,551	384,107	53.7	331,063	258,170	236,855	172,129
	3 mos.	603	1,758,956	51,330	1,865,833	266,550	271,452	17,241	443,855	1,076,687	57.7	789,146	604,655	569,997	632,602
Bessemer & Lake Erie	March	224	504,843	621	517,463	140,932	271,531	11,970	152,951	609,472	117.8	—92,009	—147,005	—115,620	—15,246
	3 mos.	224	1,351,588	1,944	1,389,605	233,803	756,343	40,388	432,840	1,560,176	112.3	—170,571	—312,233	—200,896	—407,904
Boston & Maine	March	1,939	2,767,487	563,419	3,839,754	428,249	614,104	61,140	1,592,272	2,861,594	74.5	978,160	674,091	436,006	108,642
	3 mos.	1,950	7,934,458	1,745,818	11,167,604	1,200,121	1,796,045	186,096	4,634,114	8,288,730	74.2	2,878,874	1,967,827	1,221,438	—46,794
Burlington, Rock Island	March	255	78,696	14,961	101,036	16,536	21,027	4,459	53,154	104,789	103.7	—3,753	—12,092	—18,634	—15,755
	3 mos.	255	228,092	48,227	296,306	44,172	58,669	13,468	143,949	289,304	97.6	7,002	—17,907	—33,055	—65,347
Cambria & Indiana	March	37	144,233	.....	144,334	7,423	42,091	437	14,473	71,023	49.20	73,311	38,825	107,267	82,954
	3 mos.	37	424,019	.....	424,304	17,538	125,949	1,261	40,566	203,814	48.03	220,490	110,794	321,429	241,639
Canadian Pacific Lines in Maine	March	234	285,046	12,887	308,240	23,453	44,564	10,313	95,590	179,106	58.1	129,134	118,013	100,734	70,165
	3 mos.	234	742,052	41,422	818,919	68,971	132,734	28,773	276,764	523,261	63.9	295,658	262,960	200,334	193,054
Canadian Pacific Lines in Vermont	March	91	46,077	8,722	63,996	12,450	24,759	3,656	63,431	107,272	167.6	—43,276	—50,015	—69,329	—72,401
	3 mos.	91	170,430	29,765	230,905	34,429	73,005	12,013	189,166	318,350	137.9	—87,445	—107,772	—165,040	—221,181
Central of Georgia	March	1,871	1,101,698	100,548	1,380,230	176,493	279,945	53,283	582,771	1,168,685	84.7	211,545	97,928	68,677	52,460
	3 mos.	1,871	3,041,025	317,921	3,829,930	493,039	806,071	156,446	1,671,754	3,358,321	87.7	471,609	137,013	97,841	—56,297
Central of New Jersey	March	712	2,173,908	326,690	2,695,270	234,649	523,917	43,235	1,132,360	2,006,993	74.5	688,277	251,144	80,964	84,634
	3 mos.	712	6,082,645	993,511	7,593,393	686,828	1,514,055	132,857	3,289,588	5,890,299	77.6	1,703,094	557,202	30,893	163,952
Central Vermont	March	430	361,248	27,979	426,643	63,772	86,341	12,281	215,293	398,350	93.4	28,293	1,060	—31,760	—60,043
	3 mos.	430	1,051,141	98,936	1,257,542	191,983	259,268	34,940	615,285	1,159,811	92.2	97,731	18,329	—78,988	—239,300
Chesapeake & Ohio	March	3,110	8,963,968	201,798	9,459,636	1,005,363	2,051,293	211,547	2,369,565	5,955,594	63.0	3,504,042	2,445,207	2,395,992	1,247,155
	3 mos.	3,110	25,528,631	625,314	26,952,938	2,815,649	5,924,295	614,238	6,827,010	17,082,566	63.4	9,870,372	6,836,845	6,851,877	4,743,700
Chicago & Eastern Illinois	March	927	1,051,277	108,110	1,330,946	151,495	249,973	54,458	520,110	1,041,116	78.2	289,830	210,830	67,935	18,466
	3 mos.	927	2,904,233	374,007	3,745,830	431,551	662,697	162,825	1,529,310	2,982,189	79.6	763,641	526,641	112,057	29,900
Chicago & Illinois Midland	March	131	293,573	953	313,563	34,314	69,873	18,626	84,007	224,628	71.6	88,935	59,153	63,757	44,485
	3 mos.	131	856,380	2,706	896,539	86,832	206,209	60,687	239,988	647,246	72.2	249,293	168,279	189,906	153,572
Chicago & North Western	March	8,383	4,918,111	748,256	6,389,308	841,991	1,492,048	198,478	2,878,495	5,725,079	89.6	664,229	36,916	—237,547	—443,853
	3 mos.	8,383	13,678,409	2,386,291	18,124,001	2,411,885	4,340,228	570,603	8,415,896	16,650,499	91.9	1,473,502	—379,144	—1,121,119	—2,052,873
Chicago, Burlington & Quincy	March	8,931	6,056,541	536,731	7,400,487	729,180	1,460,846	229,285	2,819,924	5,531,094	74.7	1,869,393	1,139,095	812,260	538,248
	3 mos.	8,938	17,119,257	1,874,960	21,244,755	1,988,298	4,271,583	712,354	8,313,683	16,149,096	76.0	5,095,659	2,922,214	1,898,198	450,104
Chicago Great Western	March	1,505	1,348,721	43,374	1,495,250	199,448	255,138	57,476	579,073	1,144,762	76.6	350,488	253,443	65,705	—43,754
	3 mos.	1,505	3,822,097	117,573	4,232,083	579,531	721,425	174,925	1,691,518	3,326,050	78.6	906,033	628,769	69,310	—329,715
Chicago, Indianapolis & Louisville	March	549	652,705	40,235	762,067	84,779	187,669	30,372	323,597	660,453	86.7	101,614	63,815	—41,886	—66,619
	3 mos.	549	1,757,191	129,201	2,076,255	237,363	550,813	90,835	823,080	1,903,776	91.7	172,479	44,801	—260,721	—337,151

Continued on next left-hand page

NO. 88 OF A SERIES OF FAMOUS ARCHES OF THE WORLD

MOORABOOL VIADUCT

AUSTRALIA

The Moorabool Viaduct of the Victorian Government Railways, Australia, was built about 1860. It was originally a two track structure of ten 130 ft. spans consisting of four continuous wrought iron, pin connected trusses carried on nine masonry piers. In 1893 it was converted into a single line with the introduction of heavier engines. It was again remodelled in 1910 to carry still heavier engines, by providing intermediate steel piers and substituting two lines of plate girders supporting a deck capable of carrying two tracks. Each 130 ft. span was converted into two spans of 50 ft. and one span of 25 ft. on top of a steel tower with 5 ft. between bearings on top of masonry piers.

* * * * *

The basic design of the Security Sectional Arch, too, remains the same. But it, also, has been improved to keep pace with modern steam transportation. Realize full efficiency from your arch by keeping it *complete* at all times.

* * * * *

THERE'S MORE TO SECURITY ARCHES THAN JUST BRICK

HARBISON-WALKER REFRACTORIES CO.

Refractory Specialists

AMERICAN ARCH CO.
INCORPORATED
60 EAST 42nd STREET, NEW YORK, N. Y.
Locomotive Combustion Specialists

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF MARCH AND THREE MONTHS OF CALENDAR YEAR 1939—CONTINUED

Name of road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of Way and structures	Maintenance of Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Operating income	Net railway operating income 1939	1938
Chicago, Milwaukee, St. Paul & Pacific	March	10,942	$6,825,978	$542,188	$8,134,961	$982,584	$1,729,764	$239,147	$3,355,652	$6,683,421	82.2	$1,451,540	$727,540	$321,093	$227,564
	3 mos.	10,942	19,576,905	1,713,380	23,455,628	2,739,501	4,962,368	662,727	9,879,118	19,337,750	82.4	4,117,878	1,987,878	798,252	101,548
Chicago, Rock Island & Pacific	March	7,235	4,973,000	570,432	6,029,453	670,251	1,243,640	230,198	2,432,941	4,830,749	80.1	1,198,704	730,871	479,592	217,284
	3 mos.	7,271	13,665,820	1,752,759	16,792,106	1,885,823	3,583,395	689,831	7,033,548	14,069,453	83.8	2,722,653	1,301,497	550,977	—238,129
Chicago, Rock Island & Gulf	March	627	282,184	22,620	400,900	95,492	36,761	21,369	145,571	326,712	81.5	74,188	49,525	—26,022	—3,211
	3 mos.	627	769,970	80,725	1,118,427	210,432	102,213	63,427	399,387	851,868	76.2	266,559	193,455	—30,531	—7,325
Chicago, St. Paul, Minneapolis & Omaha	March	1,629	1,127,793	95,726	1,313,521	115,927	267,226	39,637	665,646	1,154,784	87.9	158,737	44,377	—67,446	—22,401
	3 mos.	1,629	3,177,163	307,241	3,727,927	337,500	773,186	114,212	2,014,254	3,433,026	92.1	294,901	—41,079	—353,446	—255,474
Clinchfield Railroad	March	308	597,956	2,620	606,255	43,378	107,625	19,320	120,378	306,652	50.6	299,603	248,971	259,719	150,213
	3 mos.	308	1,760,653	7,955	1,784,467	111,399	301,505	57,108	349,131	866,555	48.6	917,912	767,377	816,991	493,852
Colorado & Southern	March	787	441,359	22,094	516,277	39,757	103,898	14,174	204,889	390,365	75.6	125,912	48,353	39,622	—30,683
	3 mos.	798	1,107,524	78,905	1,342,637	119,604	306,231	43,899	582,223	1,130,912	84.2	211,725	—20,303	—50,993	—130,735
Fort Worth & Denver City	March	902	449,446	35,914	474,249	64,379	87,186	18,488	184,725	387,674	81.7	86,575	48,759	6,694	21,776
	3 mos.	902	1,222,606	127,954	1,320,725	158,885	251,394	55,656	518,855	1,085,172	82.2	235,553	124,772	23,164	153,947
Columbus & Greenville	March	168	120,556	6,938	134,658	16,886	17,938	4,637	38,094	90,894	67.5	43,764	34,350	32,453	12,673
	3 mos.	168	297,713	18,382	334,065	46,087	48,203	13,416	112,295	253,637	75.9	80,428	52,177	45,970	13,321
Delaware & Hudson	March	831	1,805,993	86,671	1,972,867	177,188	335,695	42,259	766,131	1,412,185	71.6	560,682	414,364	397,005	132,288
	3 mos.	831	5,330,758	283,135	5,846,558	526,967	989,337	126,611	2,255,665	4,177,271	71.4	1,669,287	1,231,130	1,184,714	218,884
Delaware, Lackawanna & Western	March	986	3,157,590	519,143	4,111,153	230,487	815,181	111,972	1,942,681	3,251,812	79.1	859,341	424,341	347,003	368,082
	3 mos.	986	8,976,319	1,589,130	11,794,332	621,090	2,356,395	336,205	5,656,574	9,393,145	79.6	2,401,187	1,161,187	939,437	468,893
Denver & Rio Grande Western	March	2,563	1,582,806	102,944	1,782,919	320,772	494,950	63,404	668,612	1,626,928	91.2	155,991	—41,124	—87,511	—79,779
	3 mos.	2,563	4,702,857	261,044	5,230,661	598,337	1,462,081	197,335	1,984,312	4,483,188	85.7	747,473	162,606	13,929	—293,376
Denver & Salt Lake	March	232	147,488	4,997	161,031	31,109	52,716	2,480	55,003	150,589	87.3	10,442	—19,351	25,521	11,726
	3 mos.	232	540,997	18,962	585,888	59,509	139,687	7,747	185,481	422,643	72.1	163,245	74,483	194,901	127,818
Detroit & Mackinac	March	242	43,147	1,943	54,216	7,863	11,961	1,240	24,363	48,627	89.7	5,589	2,571	—1,484	2,297
	3 mos.	242	127,455	8,952	164,034	21,432	35,665	2,998	70,739	139,986	85.3	24,048	15,124	3,156	—10,787
Detroit & Toledo Shore Line	March	50	324,217	.....	325,466	23,576	24,459	8,852	102,886	167,627	51.5	157,839	117,500	60,823	35,939
	3 mos.	50	1,003,046	.....	1,006,227	61,850	69,109	27,366	320,827	502,659	50.0	503,568	389,860	218,231	143,539
Detroit, Toledo & Ironton	March	472	497,148	181	525,219	51,826	86,130	12,078	129,253	298,344	56.8	226,875	168,858	150,075	75,245
	3 mos.	472	1,722,815	513	1,798,828	153,189	258,393	36,130	401,866	907,018	50.4	891,810	683,459	614,569	315,279
Duluth, Missabe & Iron Range	March	540	79,027	2,246	99,365	112,120	237,861	4,168	152,059	538,680	542.1	—439,315	—570,202	—568,717	—395,682
	3 mos.	540	218,712	5,122	275,980	359,261	677,917	12,648	452,553	1,604,845	581.5	—1,328,865	—1,689,137	—1,689,498	—1,413,965
Duluth, Winnipeg & Pacific	March	175	98,198	1,336	101,707	22,846	19,787	2,260	49,748	99,242	97.6	2,465	—5,924	—23,524	—17,604
	3 mos.	175	321,277	3,733	332,912	60,170	58,777	6,629	150,957	288,826	86.8	44,086	17,682	—25,918	—50,066
Elgin, Joliet & Eastern	March	390	1,311,978	3	1,488,310	133,138	321,092	14,504	547,752	1,053,422	70.8	434,888	300,368	259,782	—42,145
	3 mos.	390	3,864,584	4	4,330,650	397,275	823,511	44,766	1,581,948	2,962,663	68.4	1,367,987	955,418	800,232	—134,084
Erie	March	2,290	5,615,101	357,350	6,445,535	479,442	1,359,452	166,387	2,481,724	4,744,120	73.6	1,701,415	1,127,429	939,943	16,866
	3 mos.	2,290	16,071,513	1,094,779	18,417,162	1,448,235	3,973,692	500,620	7,337,277	14,010,849	76.1	4,406,313	2,700,116	2,048,734	—269,208
New York, Susquehanna & Western	March	144	234,033	18,993	264,512	19,789	30,444	3,132	108,125	175,481	66.3	89,031	54,967	20,105	29,482
	3 mos.	144	699,121	55,200	791,562	51,009	72,942	9,588	319,050	493,823	62.4	297,739	195,772	79,131	74,573
Florida East Coast	March	685	701,277	488,476	1,320,520	94,019	155,164	26,926	379,402	733,047	55.5	587,473	503,213	419,177	622,766
	3 mos.	685	2,001,278	1,320,634	3,675,786	277,490	448,864	78,008	1,084,816	2,104,890	57.3	1,570,896	1,320,058	1,117,421	1,306,356
Georgia Railroad	March	329	275,337	10,479	314,117	35,458	52,325	18,969	132,967	254,381	81.0	59,736	43,629	54,850	36,526
	3 mos.	329	761,739	20,350	864,492	88,555	148,346	55,863	377,614	712,753	82.4	151,739	105,270	145,114	58,064
Georgia & Florida	March	408	87,657	1,391	93,189	22,963	18,154	8,444	37,419	92,160	98.9	1,029	—7,127	—12,539	—5,062
	3 mos.	408	240,210	3,752	255,609	59,093	50,535	25,090	106,900	257,412	100.7	—1,803	—25,729	—39,371	—37,994
Grand Trunk Western	March	1,032	1,709,083	67,892	1,883,944	209,501	416,775	42,197	784,586	1,530,246	81.2	353,698	225,943	159,948	—215,626
	3 mos.	1,032	4,824,083	212,295	5,395,722	636,768	1,165,998	121,676	2,310,071	4,455,392	82.6	940,330	564,526	340,251	—622,367
Canadian National Lines in New England	March	172	101,917	2,595	114,990	26,637	17,382	2,891	66,628	118,517	103.0	—3,527	—19,691	—46,302	—77,113
	3 mos.	172	294,112	11,497	336,730	84,396	53,416	8,278	208,639	369,758	109.8	—33,028	—81,520	—168,298	—178,547
Great Northern	March	8,072	4,842,124	278,512	5,603,075	566,691	1,385,487	194,459	2,252,757	4,625,902	82.6	977,173	282,116	127,363	—38,057
	3 mos.	8,072	13,135,926	901,797	15,354,850	1,716,144	3,800,063	555,564	6,576,692	13,342,962	86.9	2,011,888	—40,083	—464,090	—1,164,709
Green Bay & Western	March	234	134,366	300	138,434	20,529	17,112	6,487	48,362	96,763	69.8	41,671	28,696	20,199	13,190
	3 mos.	234	397,088	966	410,405	61,443	42,115	19,951	143,127	282,188	68.7	128,217	89,893	65,561	29,326

Continued on next left-hand page

PIONEERS

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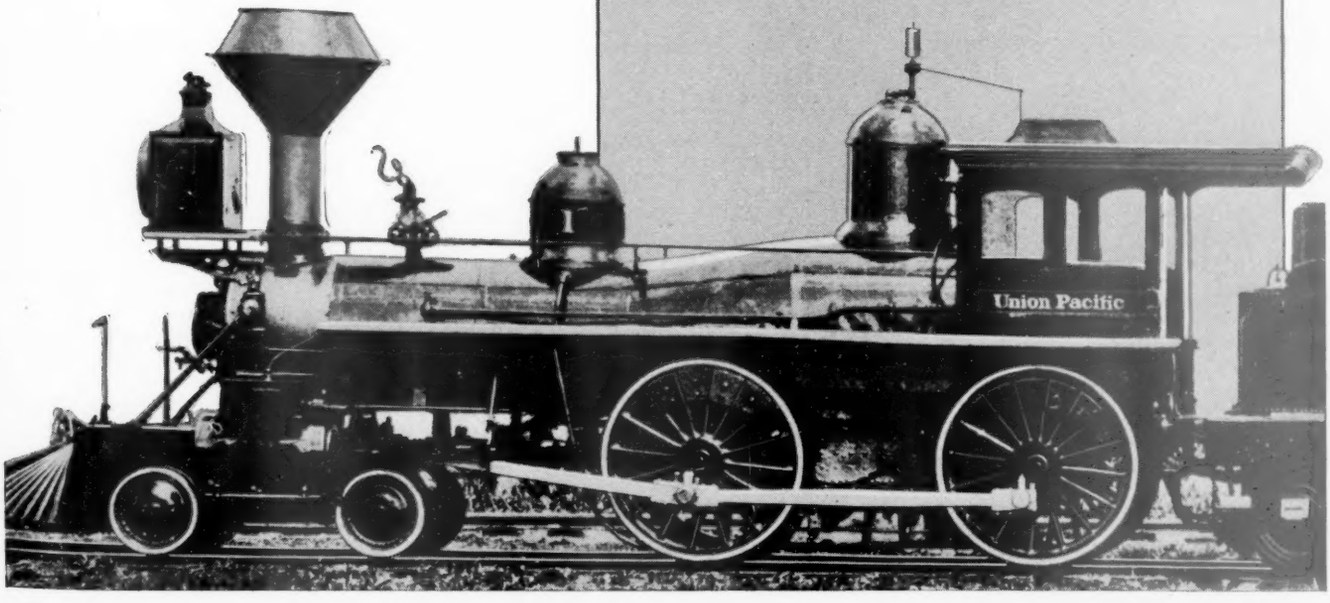

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REVENUES AND EXPENSES OF RAILWAYS

MONTH OF MARCH AND THREE MONTHS OF CALENDAR YEAR 1939—CONTINUED

Name of road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of Way and structures	Maintenance of Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Operating income	Net railway operating income 1939	1938
Gulf & Ship Island	March	259	$104,177	$4,786	$118,894	$18,907	$12,928	$2,487	$53,226	$91,709	77.1	$27,185	$10,190	$2,271	$2,938
	3 mos.	259	249,338	10,958	287,702	56,824	54,938	7,430	139,610	272,955	94.9	14,747	—35,732	—60,780	—59,571
Gulf, Mobile & Northern	March	824	555,098	16,952	597,799	62,335	89,840	39,886	155,557	381,615	63.8	216,184	169,184	125,219	78,401
	3 mos.	824	1,464,410	52,581	1,586,847	200,261	243,040	119,841	445,879	1,102,656	69.5	484,191	343,191	232,754	130,139
Illinois Central	March	4,949	6,492,632	759,190	7,890,920	770,608	1,710,703	182,661	3,113,577	6,100,456	77.3	1,790,464	1,079,402	1,033,923	1,018,227
	3 mos.	4,949	18,907,698	2,335,171	22,920,507	2,244,363	4,898,945	555,704	9,119,697	17,792,467	77.6	5,128,040	3,030,462	2,874,278	2,888,616
Yazoo & Mississippi Valley	March	1,619	1,134,235	51,445	1,270,681	117,249	174,882	28,863	482,464	849,092	66.8	421,589	282,778	228,807	27,488
	3 mos.	1,619	3,017,912	155,429	3,403,020	352,792	517,782	88,062	1,406,305	2,496,498	73.4	906,522	493,092	308,422	273,584
Illinois Central System	March	6,568	7,626,867	810,635	9,161,601	887,857	1,885,585	211,524	3,596,041	6,949,548	75.9	2,212,053	1,360,125	1,272,643	1,055,715
	3 mos.	6,568	21,925,610	2,490,600	26,323,527	2,597,155	5,416,727	643,766	10,526,002	20,288,965	77.1	6,034,562	3,517,393	3,210,439	3,191,000
Illinois Terminal	March	496	367,202	58,871	464,564	44,642	70,565	15,994	169,051	319,022	68.67	145,542	103,520	86,943	61,361
	3 mos.	496	1,035,348	170,456	1,314,510	136,829	216,925	48,258	496,574	953,983	72.57	360,527	236,003	192,037	126,613
Kansas City Southern	March	879	945,283	15,548	1,070,789	86,665	159,561	51,949	319,186	670,400	62.6	400,389	301,389	259,923	239,401
	3 mos.	879	2,792,640	42,806	3,152,740	264,760	458,415	153,674	925,887	1,969,418	62.5	1,183,322	886,322	758,563	725,739
Kansas, Oklahoma & Gulf	March	327	217,277	350	220,106	36,872	26,123	9,366	42,260	125,227	56.9	94,879	74,346	58,631	65,767
	3 mos.	327	635,191	1,050	644,007	76,203	45,823	27,049	125,470	301,667	46.8	342,340	281,626	228,432	195,657
Lake Superior & Ishpeming	March	156	22,683	65	23,557	23,229	19,311	743	21,055	70,361	298.7	—46,804	—64,793	—65,583	—68,035
	3 mos.	156	68,150	202	70,791	56,266	58,554	2,026	62,973	198,278	280.1	—127,487	—199,677	—202,475	—207,577
Lehigh & Hudson River	March	96	130,892	65	131,749	9,234	22,464	3,650	44,291	86,360	65.6	45,389	29,805	18,512	15,341
	3 mos.	96	388,576	217	390,750	26,794	66,519	11,292	132,782	257,334	65.9	133,416	86,484	55,007	297
Lehigh & New England	March	200	303,216	.....	305,334	24,899	58,796	7,230	104,572	213,604	70.0	91,730	62,106	75,524	48,954
	3 mos.	200	852,321	.....	858,369	73,769	172,880	20,895	302,182	618,731	72.1	239,638	169,220	202,382	100,877
Lehigh Valley	March	1,283	3,262,979	145,091	3,637,109	208,526	697,448	108,124	1,562,739	2,696,315	74.1	940,794	687,588	499,577	111,560
	3 mos.	1,283	9,779,002	469,436	10,903,332	577,078	1,895,945	325,128	4,697,917	7,875,206	72.2	3,028,126	2,210,333	1,593,083	398,501
Louisiana & Arkansas	March	606	482,855	6,386	510,056	59,396	76,663	31,742	136,405	330,214	64.7	179,842	134,237	108,817	99,145
	3 mos.	606	1,368,380	20,354	1,444,695	189,585	216,482	93,681	392,122	960,333	66.5	484,362	357,681	290,458	272,612
Louisiana, Arkansas & Texas	March	240	92,415	.....	94,903	21,018	13,637	4,888	32,917	77,039	81.2	17,864	13,584	152	—5,679
	3 mos.	240	258,640	3	267,632	58,460	35,893	14,191	98,566	220,717	82.5	46,915	33,013	—3,844	—38,337
Louisville & Nashville	March	4,908	6,131,421	468,926	7,154,192	779,276	1,727,474	194,610	2,520,899	5,503,951	76.9	1,650,241	1,025,843	1,051,749	380,430
	3 mos.	4,920	18,205,112	1,508,893	21,205,244	2,276,410	4,893,025	575,343	7,454,933	16,021,197	75.6	5,184,047	3,240,856	3,321,791	1,180,665
Maine Central	March	1,004	959,266	70,561	1,119,660	160,247	190,244	14,195	397,950	798,248	71.3	321,412	254,246	182,865	113,725
	3 mos.	1,004	2,726,769	208,882	3,197,144	460,023	543,505	38,915	1,146,792	2,291,518	71.7	905,626	704,107	518,514	308,605
Midland Valley	March	352	107,052	3	108,379	12,641	8,306	2,621	29,922	60,072	55.4	48,307	36,155	30,869	17,291
	3 mos.	352	314,664	4	319,118	30,339	22,855	8,101	87,501	168,830	52.9	150,288	116,412	94,153	53,611
Minneapolis & St. Louis	March	1,524	673,130	7,792	717,691	72,233	129,880	46,714	284,917	559,608	78.0	158,083	118,155	78,502	54,786
	3 mos.	1,524	1,844,059	23,078	1,969,301	203,962	349,744	139,433	809,099	1,595,119	81.0	374,182	250,294	131,965	57,123
Minneapolis, St. Paul & Sault Ste. Marie	March	4,290	1,656,381	63,019	1,881,665	269,950	426,621	62,063	913,424	1,754,303	93.2	127,362	—32,721	—126,154	—199,356
	3 mos.	4,290	4,603,797	197,695	5,230,038	804,840	1,167,326	180,639	2,691,906	5,096,438	97.4	133,600	—389,706	—671,284	—963,007
Duluth, South Shore & Atlantic	March	550	119,635	9,258	141,563	37,332	38,547	5,179	80,303	167,467	118.3	—25,904	—40,396	—42,189	—11,006
	3 mos.	550	323,703	28,499	389,107	90,556	100,172	15,868	229,212	454,299	116.8	—65,192	—106,320	—116,394	—118,471
Spokane International	March	152	50,530	825	57,882	9,313	7,399	1,886	21,748	45,304	78.3	12,578	7,741	5,402	4,571
	3 mos.	152	150,026	2,865	172,581	24,397	19,057	6,157	67,930	131,743	76.3	40,838	26,573	19,670	—10,266
Mississippi Central	March	150	71,044	1,497	74,871	20,216	9,803	7,422	20,600	63,004	84.2	11,867	6,986	1,449	6,328
	3 mos.	150	183,451	4,203	194,231	53,289	26,886	21,578	60,833	177,337	91.3	16,894	2,612	—12,163	—3,480
Missouri & Arkansas	March	365	83,989	1,452	91,162	22,169	10,285	6,859	30,072	75,262	82.6	15,900	11,903	3,781	—6,276
	3 mos.	365	225,947	4,208	254,152	63,426	30,779	18,116	86,361	214,360	84.3	39,792	28,303	7,292	—11,832
Missouri-Illinois	March	193	173,826	345	175,893	22,732	14,727	2,990	46,667	92,024	52.3	83,869	64,351	45,042	9,449
	3 mos.	193	477,356	1,048	483,233	57,304	47,239	8,321	138,904	267,646	55.4	215,587	181,618	129,252	3,446
Missouri-Kansas-Texas Lines	March	3,294	1,919,707	147,545	2,313,972	326,873	405,713	110,224	881,236	1,859,530	80.4	454,442	273,563	93,779	—6,350
	3 mos.	3,294	5,359,486	477,798	6,505,980	941,752	1,184,242	329,607	2,622,664	5,468,988	84.1	1,036,992	566,966	37,785	—94,122
Missouri Pacific	March	7,173	5,671,827	354,803	6,607,429	1,021,507	1,442,907	231,264	2,515,769	5,471,708	82.8	1,135,721	633,251	250,694	214,494
	3 mos.	7,173	16,348,638	1,130,562	19,154,106	2,494,287	4,040,202	695,064	7,450,975	15,445,529	80.6	3,708,577	2,231,544	1,060,154	648,310
Gulf Coast Lines	March	1,759	1,628,903	38,254	1,734,431	215,073	215,638	44,473	430,735	957,619	55.21	776,812	702,770	538,224	469,325
	3 mos.	1,759	4,427,180	110,577	4,735,869	585,792	582,959	136,653	1,240,415	2,691,319	56.83	2,044,550	1,826,528	1,359,804	1,181,791

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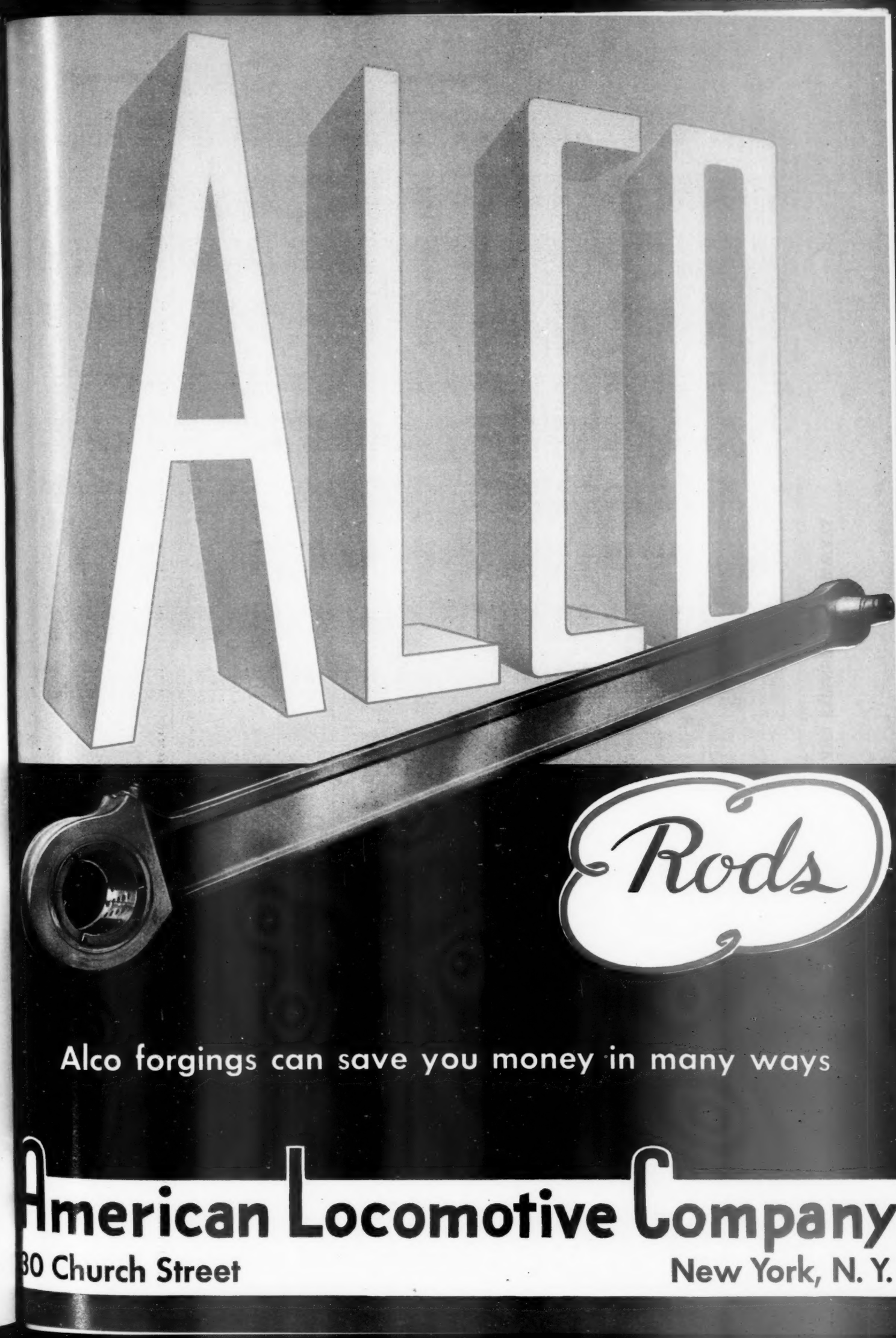
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REVENUES AND EXPENSES OF RAILWAYS

MONTH OF MARCH AND THREE MONTHS OF CALENDAR YEAR 1939—CONTINUED

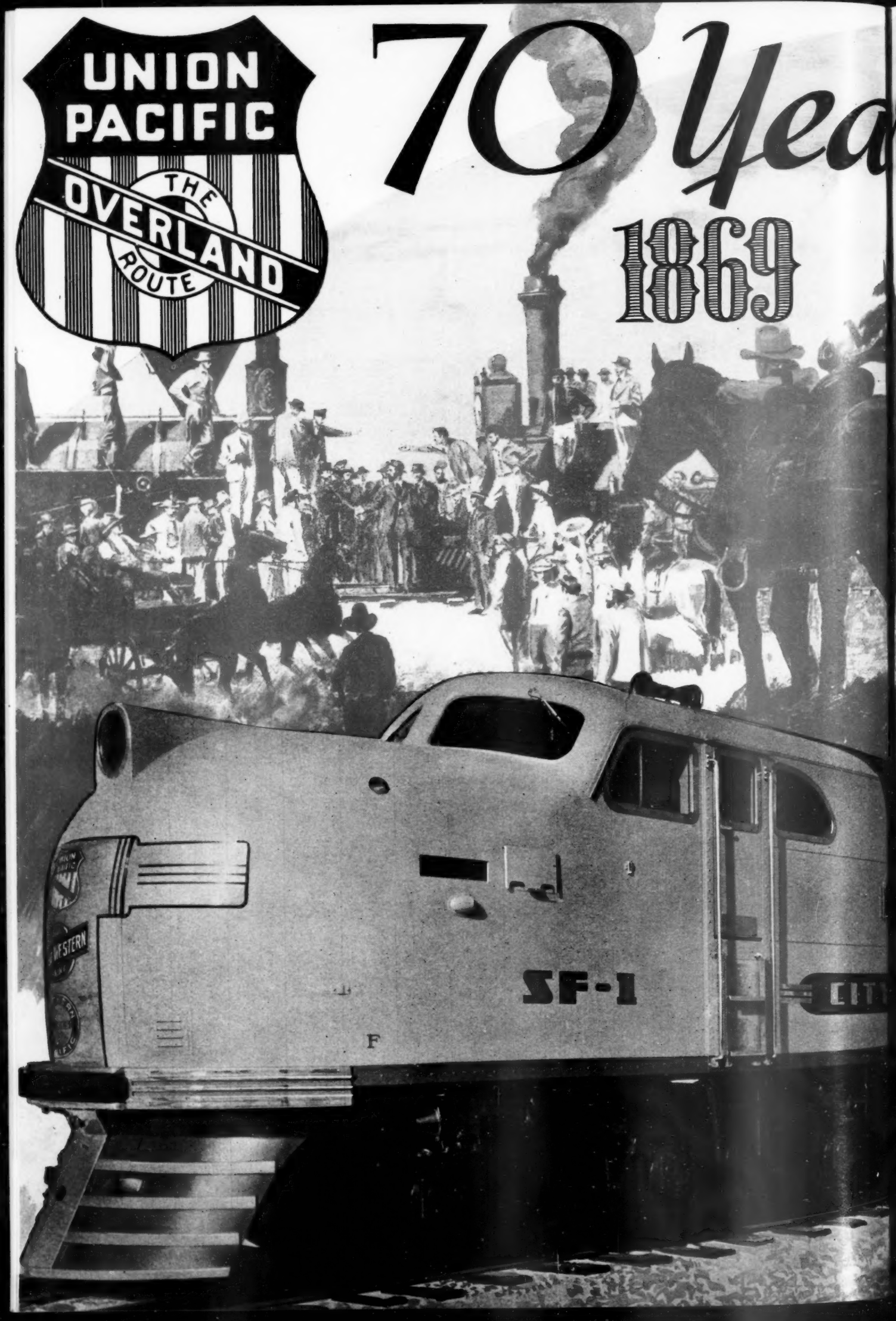
Name of road		Av. mileage operated during period	Operating revenues			Operating expenses					Operating ratio	Net from railway operation	Operating income	Net railway operating income	
			Freight	Passenger	Total (inc. misc.)	Maintenance of Way and structures	Maintenance of Equipment	Traffic	Transportation	Total				1939	1938
International Great Northern	March	1,155	$833,981	$63,636	$1,005,081	$158,262	$196,595	$29,828	$416,715	$856,414	85.2	$148,667	$88,773	—$19,517	—$11,885
	3 mos.	1,155	2,302,420	203,551	2,809,766	455,842	592,768	94,979	1,231,828	2,536,168	90.3	273,598	96,333	—196,199	—100,655
Mobile & Ohio	March	1,180	943,565	21,577	1,014,981	143,850	199,853	43,324	358,158	791,197	78.0	223,784	158,871	82,209	71,043
	3 mos.	1,180	2,585,541	65,119	2,783,251	413,679	573,984	129,878	1,031,841	2,278,664	81.9	504,587	315,577	94,895	183,260
Monongahela	March	172	368,047	496	370,261	36,513	32,517	493	82,494	154,766	41.8	215,495	187,931	110,160	73,653
	3 mos.	172	1,018,277	1,687	1,025,124	94,605	88,830	1,560	237,289	431,229	42.1	593,895	512,067	288,232	89,341
Montour	March	56	156,632	.....	158,796	8,763	42,277	1,089	40,686	99,223	62.5	59,573	35,761	63,932	31,098
	3 mos.	56	400,554	.....	406,880	24,924	119,644	3,102	113,186	281,363	69.2	125,517	65,099	153,235	107,113
Nashville, Chattanooga & St. Louis	March	1,111	1,070,592	98,906	1,313,077	132,222	245,936	65,700	488,496	987,332	75.2	325,745	245,609	200,735	112,913
	3 mos.	1,111	2,985,956	323,942	3,725,893	373,017	674,319	200,799	1,417,276	2,839,137	76.2	886,756	652,242	556,196	199,058
Nevada Northern	March	165	48,728	985	54,139	8,114	4,223	1,384	11,950	30,431	56.2	23,708	13,021	15,414	11,606
	3 mos.	165	140,442	2,110	155,934	21,300	12,515	3,703	32,087	84,497	54.2	71,437	41,000	48,404	26,555
New York Central	March	11,043	20,122,125	4,472,758	27,777,349	2,738,225	6,312,958	548,004	10,982,938	21,810,771	78.5	5,966,578	2,976,478	1,822,066	—36,918
	3 mos.	11,043	57,327,152	14,177,234	80,108,165	7,932,374	17,769,221	1,613,529	31,906,512	63,009,355	78.7	17,098,810	8,173,999	4,530,722	—1,798,743
Pittsburgh & Lake Erie	March	233	1,346,285	38,503	1,441,794	161,535	618,402	29,513	498,322	1,388,894	96.3	52,900	—77,118	98,108	97,970
	3 mos.	233	3,650,152	125,806	3,926,738	386,866	1,539,736	86,389	1,440,240	3,691,877	94.0	234,861	—175,927	419,738	—23,853
New York, Chicago & St. Louis	March	1,704	3,339,621	55,748	3,506,396	348,917	535,010	125,999	1,276,529	2,409,726	68.7	1,096,670	888,434	593,676	196,391
	3 mos.	1,704	9,476,947	183,784	9,968,291	1,007,968	1,527,598	363,011	3,700,656	6,958,315	69.8	3,009,976	2,399,597	1,564,732	459,092
New York, New Haven & Hartford	March	1,876	3,937,198	2,080,925	6,772,211	714,189	1,156,749	104,864	2,653,372	4,995,694	73.8	1,776,517	1,261,517	646,671	—132,126
	3 mos.	1,882	10,890,907	6,320,598	19,247,839	1,962,439	3,276,103	301,490	7,659,957	14,292,381	74.3	4,955,458	3,410,458	1,585,028	—553,462
New York Connecting	March	21	253,202	.....	267,202	15,665	10,180	.....	33,070	60,184	22.5	207,018	165,096	164,951	85,687
	3 mos.	21	705,407	.....	732,999	40,792	30,800	.....	93,924	169,343	23.1	563,656	437,894	445,510	137,385
New York, Ontario & Western	March	576	521,800	3,489	572,562	46,917	114,070	15,488	279,611	479,743	83.8	92,819	39,560	—5,803	—66,747
	3 mos.	576	1,565,329	15,762	1,727,817	146,222	355,222	44,728	849,880	1,473,470	85.3	254,347	93,648	—37,240	—204,844
Norfolk & Western	March	2,191	6,471,750	132,239	6,833,593	722,523	1,488,945	140,862	1,736,584	4,265,596	62.4	2,567,997	1,701,791	1,869,401	824,287
	3 mos.	2,191	19,614,705	408,594	20,647,729	2,052,330	4,397,947	410,186	5,033,100	12,452,522	60.3	8,195,207	5,352,236	5,887,570	2,281,674
Norfolk Southern	March	805	352,826	3,034	372,830	73,367	52,056	25,779	142,171	309,801	83.1	63,029	30,079	13,181	5,979
	3 mos.	805	926,826	7,626	980,537	209,288	163,927	73,191	395,911	897,633	91.6	92,904	—12,492	—49,064	—77,555
Northern Pacific	March	6,721	3,912,450	239,726	4,581,040	685,735	1,131,415	177,193	1,924,672	4,198,366	91.7	382,674	—174,098	108,408	209,175
	3 mos.	6,721	10,561,705	760,211	12,524,928	1,508,983	3,156,951	490,266	5,558,111	11,543,996	92.2	980,932	—656,319	165,886	—350,262
Northwestern Pacific	March	352	175,642	49,486	251,168	63,995	51,608	3,312	148,357	279,955	111.5	—28,787	—46,846	—56,747	—166,150
	3 mos.	352	443,256	139,231	654,813	168,656	141,577	9,445	427,644	782,639	119.5	—127,826	—180,832	—205,385	—448,342
Oklahoma City-Ada-Atoka	March	132	25,873	323	27,974	6,696	1,348	847	11,057	21,856	78.1	6,118	3,166	—1,058	2,515
	3 mos.	132	79,176	760	85,553	18,294	3,415	2,438	33,095	62,955	73.6	22,598	13,893	1,601	19,310
Pennsylvania	March	10,289	25,023,432	5,204,841	33,320,950	3,438,145	6,922,364	721,476	12,296,219	24,579,878	73.8	8,741,072	5,499,829	4,994,301	3,702,346
	3 mos.	10,289	70,851,860	16,509,506	95,690,220	9,899,705	20,209,153	2,004,160	36,083,529	71,842,275	75.1	23,847,945	15,214,781	13,728,714	7,727,193
Long Island	March	383	628,146	1,139,885	1,862,650	251,696	376,640	7,367	974,135	1,645,025	88.3	217,625	717	—164,076	—103,245
	3 mos.	383	1,643,726	3,426,660	5,326,685	647,963	1,074,204	20,668	2,843,503	4,691,121	88.1	635,564	39,508	—468,702	—371,134
Pennsylvania-Reading Seashore Lines	March	412	246,892	87,077	352,346	78,764	83,769	6,085	262,612	448,016	127.2	—95,670	—173,604	—236,016	—235,257
	3 mos.	412	698,930	278,006	1,028,179	221,162	227,539	16,884	763,344	1,274,069	123.9	—245,890	—469,448	—647,575	—706,089
Pere Marquette	March	2,115	2,368,548	57,060	2,553,125	309,621	526,209	63,304	972,156	1,964,918	77.0	588,207	432,115	304,974	—95,761
	3 mos.	2,115	6,623,611	214,252	7,166,749	892,451	1,526,194	183,409	2,811,009	5,693,715	79.4	1,473,034	1,011,952	710,670	—468,979
Pittsburg & Shawmut	March	101	63,159	.....	63,444	8,039	19,242	1,469	20,205	52,920	83.4	10,524	8,314	5,359	344
	3 mos.	101	169,477	.....	170,664	18,940	60,145	4,482	55,052	149,765	87.8	20,899	14,856	4,853	—23,069
Pittsburgh & West Virginia	March	136	249,539	.....	266,724	34,358	54,515	15,796	64,987	192,849	72.3	73,875	50,091	59,773	56,430
	3 mos.	136	746,295	84	797,083	89,931	163,645	48,177	188,223	560,357	70.3	236,726	166,991	200,961	147,960
Pittsburg, Shawmut & Northern	March	190	79,587	.....	80,179	10,627	12,312	1,057	26,023	56,011	69.8	24,168	19,183	12,840	1,298
	3 mos.	190	261,323	.....	263,566	30,012	37,409	3,009	85,645	174,086	66.0	89,480	74,493	50,864	—5,800
Reading	March	1,450	4,102,444	267,268	4,595,789	326,294	899,543	70,124	1,852,065	3,306,497	71.9	1,289,292	952,193	894,851	689,363
	3 mos.	1,450	11,887,731	840,034	13,326,774	973,711	2,564,802	208,317	5,450,555	9,650,846	72.4	3,675,928	2,687,764	2,559,258	1,581,251
Richmond, Fredericksburg & Potomac	March	118	416,111	296,863	860,858	65,525	147,124	9,360	318,148	594,727	69.1	266,131	199,264	112,925	65,598
	3 mos.	118	1,146,635	865,911	2,367,320	166,251	415,764	28,905	933,112	1,698,190	71.7	669,130	484,405	266,812	123,839
Rutland	March	407	195,229	25,002	282,194	36,876	56,736	10,706	157,239	272,951	96.7	9,243	—8,217	—9,608	—68,561
	3 mos.	407	540,659	85,333	777,465	102,234	168,279	30,642	452,336	785,703	101.1	—8,238	—73,953	—76,717	—239,312

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF MARCH AND THREE MONTHS OF CALENDAR YEAR 1939—CONTINUED

Name of road		Av. mileage operated during period	Operating revenues			Operating expenses					Operating ratio	Net from railway operation	Operating income	Net railway operating income	
						Maintenance of									
			Freight	Passenger	Total (inc. misc.)	Way and structures	Equipment	Traffic	Transportation	Total				1939	1938
St. Louis-San Francisco	March	4,843	$3,012,919	$215,441	$3,558,581	$556,113	$863,579	$119,123	$1,408,424	$3,129,206	87.9	$429,375	$82,621	$68,534	$39,260
	3 mos.	4,843	8,468,199	728,989	10,121,453	1,669,651	2,559,888	350,719	4,098,908	9,222,126	91.1	899,327	—30,886	—53,278	—636,102
St. Louis, San Francisco & Texas	March	267	97,058	387	103,607	23,896	14,204	8,319	53,052	105,972	102.3	—2,365	—10,961	—37,756	—28,746
	3 mos.	267	312,485	1,352	331,637	70,780	42,755	24,258	153,758	311,827	94.0	19,810	—5,245	—87,446	—103,898
St. Louis Southwestern Lines	March	1,701	1,599,601	20,652	1,685,203	213,799	301,391	83,056	532,542	1,204,034	71.4	481,169	370,938	235,517	181,010
	3 mos.	1,701	4,385,305	63,099	4,629,408	624,537	897,842	249,094	1,583,376	3,580,032	77.3	1,049,376	724,547	305,462	290,421
Seaboard Air Line	March	4,317	3,028,085	798,085	4,259,900	527,830	781,110	174,418	1,524,641	3,247,005	76.2	1,012,895	662,895	495,658	428,155
	3 mos.	4,317	8,651,581	2,310,968	12,111,585	1,518,478	2,290,616	543,383	4,388,888	9,421,457	77.8	2,690,128	1,640,128	1,156,637	738,558
Southern Railway	March	6,587	6,762,008	653,793	8,139,405	1,008,169	1,392,196	153,162	2,827,033	5,703,342	70.1	2,436,063	1,803,233	1,530,758	756,746
	3 mos.	6,594	19,192,314	1,947,348	23,123,277	2,935,179	3,929,977	470,377	8,334,762	16,600,129	71.8	6,523,148	4,592,607	3,751,116	1,344,841
Alabama Great Southern	March	315	555,145	39,929	642,478	86,992	126,532	11,138	185,940	433,034	67.4	209,444	149,929	167,603	102,742
	3 mos.	315	1,530,893	116,481	1,771,550	249,358	375,913	37,571	562,704	1,292,726	73.0	478,824	282,589	331,304	190,471
Cincinnati, New Orleans & Texas Pacific	March	337	1,322,222	104,898	1,516,025	185,464	269,811	28,499	387,539	925,452	61.0	590,573	461,900	454,302	287,087
	3 mos.	337	3,752,640	354,127	4,366,013	546,909	811,571	81,678	1,132,262	2,733,650	62.6	1,632,363	1,208,495	1,213,629	734,598
Georgia Southern & Florida	March	398	134,142	56,857	214,985	33,308	36,499	1,537	92,281	172,773	80.4	42,212	25,560	8,711	655
	3 mos.	398	403,714	194,130	666,418	96,645	110,920	5,055	268,723	507,634	76.2	158,784	109,509	72,466	28,389
New Orleans & Northeastern	March	204	229,456	13,385	263,264	34,144	38,311	4,902	82,219	171,463	65.1	91,801	60,655	36,719	27,702
	3 mos.	204	606,424	42,904	703,165	94,872	108,402	16,577	217,996	472,531	67.2	230,634	137,449	68,620	2,940
Northern Alabama	March	100	54,194	992	56,982	14,339	1,293	906	18,274	36,595	64.2	20,387	14,534	5,828	133
	3 mos.	100	161,170	2,701	169,077	34,333	3,943	2,765	51,556	98,054	58.0	71,023	53,736	28,621	—3,417
Southern Pacific	March	8,657	10,148,050	1,563,467	12,904,162	1,325,278	2,430,092	374,007	4,820,287	9,747,507	75.5	3,156,655	1,967,486	1,296,569	—321,935
	3 mos.	8,657	27,398,104	4,436,564	34,990,279	3,906,945	6,953,688	994,445	13,736,126	27,882,018	79.7	7,108,261	3,592,328	1,865,308	—1,540,473
Southern Pacific Steamship Lines	March	....	576,947	27,128	630,931	15,552	105,200	17,570	433,351	587,037	93.0	43,894	26,254	26,027	—110,809
	3 mos.	....	1,577,744	75,836	1,740,142	41,820	314,886	50,631	1,177,133	1,633,010	93.8	107,132	60,666	60,127	—237,587
Texas & New Orleans	March	4,416	3,166,581	233,463	3,700,981	551,931	607,493	125,414	1,246,056	2,735,679	73.9	965,302	664,549	427,448	208,022
	3 mos.	4,416	8,899,836	733,012	10,469,911	1,539,491	1,703,987	370,043	3,623,049	7,864,590	75.1	2,605,321	1,704,194	1,021,351	321,151
Spokane, Portland & Seattle	March	948	580,420	31,414	670,962	123,440	90,620	8,905	240,981	492,226	73.4	178,736	105,069	56,254	88,787
	3 mos.	948	1,630,720	85,422	1,874,715	318,190	249,905	28,504	723,516	1,403,403	74.9	471,312	253,666	118,703	170,298
Tennessee Central	March	287	182,552	3,819	198,905	37,134	32,651	6,432	70,150	156,210	78.5	42,695	30,484	13,210	11,974
	3 mos.	287	537,031	11,574	583,368	99,390	92,287	19,214	214,588	455,745	78.1	127,623	91,242	39,798	27,350
Texas & Pacific	March	1,936	1,914,485	174,283	2,266,957	265,853	459,463	71,030	729,078	1,644,262	72.5	622,695	459,986	346,088	388,795
	3 mos.	1,936	5,321,069	521,853	6,355,001	699,799	1,203,987	211,787	2,079,414	4,546,813	71.5	1,808,188	1,349,292	1,014,390	896,025
Texas Mexican	March	162	75,441	250	86,969	10,220	11,331	3,003	32,101	61,695	70.9	25,274	19,312	16,385	—4,355
	3 mos.	162	186,249	1,644	219,927	30,309	35,597	9,027	93,140	184,396	83.8	35,531	17,911	9,426	163
Toledo, Peoria & Western	March	239	186,619	.....	189,030	41,653	13,443	16,081	42,962	123,955	65.6	65,075	44,183	30,058	18,016
	3 mos.	239	483,470	58	490,165	93,607	43,284	48,350	119,154	335,050	68.4	115,115	103,704	65,234	61,290
Union Pacific System	March	9,904	9,779,222	1,198,978	12,070,261	1,203,159	2,552,865	392,229	4,374,206	9,221,909	76.4	2,848,352	1,549,156	920,029	669,002
	3 mos.	9,904	27,835,962	3,383,260	34,222,341	2,861,926	7,174,138	1,127,029	12,817,408	26,062,982	76.2	8,159,359	4,323,005	2,470,300	2,082,423
Utah	March	111	62,316	.....	62,636	10,292	22,913	421	18,716	55,937	89.3	6,699	—2,796	—140	—3,423
	3 mos.	111	232,533	.....	233,383	28,284	77,034	1,281	65,208	183,431	78.6	49,952	15,824	22,929	—18,879
Virginian	March	638	1,909,419	2,714	1,955,198	172,562	374,153	23,426	274,139	880,112	45.0	1,075,086	800,086	829,261	559,606
	3 mos.	638	5,505,818	7,962	5,640,793	482,096	1,117,583	71,083	823,784	2,595,803	46.0	3,044,990	2,249,990	2,347,942	1,718,668
Wabash	March	2,410	3,247,277	168,299	3,670,366	410,187	619,511	147,833	1,484,608	2,818,870	76.8	851,496	629,563	265,005	—74,985
	3 mos.	2,410	9,212,818	553,863	10,490,580	1,184,233	1,873,151	439,113	4,343,853	8,307,967	79.2	2,182,613	1,528,738	430,478	—652,478
Ann Arbor	March	294	321,487	1,977	331,734	26,553	67,976	13,005	150,604	269,962	81.4	61,772	41,206	25,956	20,903
	3 mos.	294	928,865	6,808	957,575	86,422	203,574	38,980	440,925	805,225	84.1	152,350	91,800	46,067	—29,330
Western Maryland	March	878	1,343,431	5,415	1,386,679	154,724	317,550	38,958	377,842	938,038	67.6	448,641	373,641	374,216	265,210
	3 mos.	878	3,882,793	16,903	4,015,935	436,557	928,784	119,398	1,094,173	2,722,329	67.8	1,293,606	1,068,606	1,098,294	776,371
Western Pacific	March	1,208	1,023,772	26,749	1,076,946	185,904	273,440	60,192	482,351	1,057,934	98.2	19,012	—64,348	—108,524	—447,469
	3 mos.	1,208	3,020,822	66,105	3,150,465	452,598	735,446	170,762	1,368,231	2,883,404	91.5	267,061	25,191	—146,374	—1,076,482
Wheeling & Lake Erie	March	508	1,120,137	.....	1,155,182	155,589	246,186	35,088	350,573	817,729	70.8	337,453	205,521	264,459	157,918
	3 mos.	508	3,173,927	Dr. 1	3,278,891	345,977	701,139	107,298	1,030,394	2,273,841	69.3	1,005,050	609,083	799,045	225,565

(Freight Operating Statistics appear on second left-hand page)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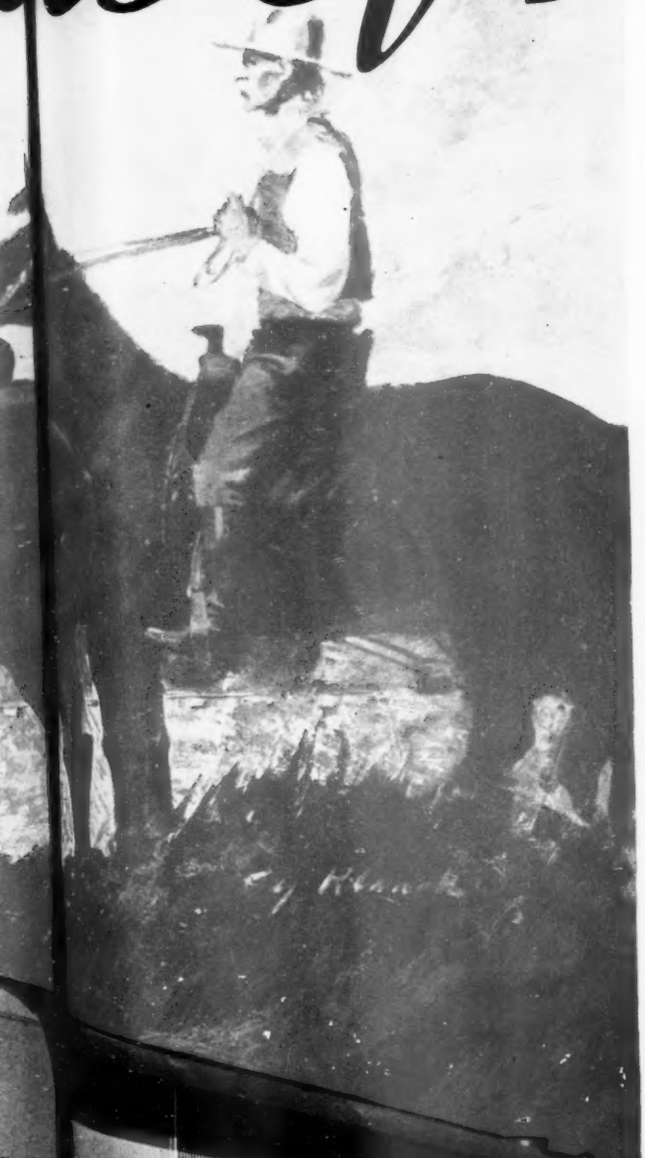

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SUBSIDIARY OF GENERAL MOTORS LA GRANGE, ILLINOIS, U. S. A.

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1939

Freight Operating Statistics of Large Steam Railways—Selected Items for the Month of February

Region, road, and year	Miles of road operated	Train-miles	Locomotive-miles: Principal and helper	Locomotive-miles: Light	Car-miles: Loaded (*thousands*)	Car-miles: Per cent loaded	Ton-miles (*thousands*): Gross, excluding locomotives and tenders	Ton-miles (*thousands*): Net, revenue and non-revenue	Number of road locomotives on line: Serviceable: Not stored	Serviceable: Stored	Unserviceable	Per cent unserviceable
New England Region:												
Boston & Albany	1939	374	124,159	128,851	9,144	2,505	64.1	144,289	49,542	52	4	34	37.8
	1938	374	104,615	108,274	7,559	2,263	65.5	126,962	43,087	48	5	37	41.1
Boston & Maine	1939	1,930	252,915	281,752	22,663	8,322	66.8	483,616	180,075	138	..	90	39.5
	1938	1,941	234,476	258,712	19,119	7,572	67.5	431,764	156,464	120	1	128	51.4
N. Y., New Hav. & Hartf.	1939	1,862	303,504	384,949	27,586	10,299	65.0	572,994	206,661	166	3	102	38.2
	1938	1,983	285,174	355,293	25,442	9,023	63.6	505,414	178,686	170	19	88	29.5
Great Lakes Region:												
Delaware & Hudson	1939	830	200,068	272,933	30,162	6,707	63.2	432,301	207,730	124	48	80	31.7
	1938	830	180,455	237,463	23,582	5,788	61.6	368,228	167,229	87	144	32	12.2
Del., Lack. & Western	1939	983	317,831	355,039	51,270	10,673	66.5	632,794	249,203	121	5	86	40.6
	1938	983	292,552	326,041	43,492	9,278	66.0	548,487	210,962	124	9	84	38.7
Erie (incl. Chi. & Erie)	1939	2,290	564,442	605,644	35,147	23,891	65.4	1,461,858	575,272	205	31	236	50.0
	1938	2,275	526,574	552,752	34,611	21,798	64.4	1,316,486	493,860	210	51	210	44.6
Grand Trunk Western	1939	1,027	230,336	233,386	1,850	5,965	61.0	373,541	133,279	68	..	44	39.3
	1938	1,027	201,138	202,802	2,244	5,144	60.6	320,617	112,648	75	4	42	34.7
Lehigh Valley	1939	1,266	291,489	322,338	46,807	10,922	63.6	692,284	285,470	122	3	102	44.9
	1938	1,289	270,064	295,380	38,127	10,070	64.0	632,113	257,227	123	3	129	50.6
New York Central	1939	10,613	2,418,868	2,551,256	156,280	76,729	58.1	5,271,765	2,142,785	864	153	425	29.5
	1938	10,653	2,198,428	2,319,803	129,712	68,171	57.8	4,655,792	1,851,883	788	309	382	25.8
N. Y., Chicago & St. Louis	1939	1,672	454,202	460,581	6,034	15,630	62.7	961,631	359,447	152	13	33	16.7
	1938	1,672	424,759	427,090	5,460	14,420	61.0	891,365	319,329	145	28	25	12.6
Pere Marquette	1939	2,081	302,972	309,873	6,860	7,978	59.0	526,679	195,992	107	3	52	32.1
	1938	2,081	279,552	286,169	5,014	7,287	59.0	474,837	171,644	109	22	34	20.6
Pittsburgh & Lake Erie	1939	233	54,785	57,754	40	2,263	58.1	191,008	101,675	19	15	37	52.1
	1938	233	42,750	43,929	.....	1,637	55.9	138,566	72,357	18	22	31	43.7
Wabash	1939	2,397	501,204	513,036	10,617	15,334	63.8	922,034	325,236	145	6	124	45.1
	1938	2,421	489,394	501,505	9,437	14,363	62.8	866,626	298,368	139	21	131	45.0
Central Eastern Region:												
Baltimore & Ohio	1939	6,285	1,214,777	1,499,720	160,160	36,287	60.4	2,532,937	1,115,938	565	152	518	41.9
	1938	6,326	1,129,673	1,377,268	142,156	32,351	59.8	2,222,570	950,987	572	157	545	42.8
Central of New Jersey	1939	681	135,397	153,321	30,022	4,218	59.3	302,913	144,989	75	1	79	51.0
	1938	678	129,610	146,448	27,188	3,865	57.9	280,654	131,792	72	5	76	49.7
Chicago & Eastern Illinois	1939	927	162,918	163,208	2,618	4,084	64.4	260,701	109,021	58	..	36	38.3
	1938	927	148,553	148,979	2,634	3,841	64.2	245,064	103,837	52	3	51	48.1
Elgin, Joliet & Eastern	1939	390	93,578	95,169	1,176	2,188	57.5	174,875	83,655	55	..	26	32.1
	1938	435	77,544	78,589	1,221	1,660	56.9	129,258	59,493	49	3	31	37.3
Long Island	1939	379	25,904	26,886	15,656	235	51.2	18,606	7,360	36	4	8	16.7
	1938	390	24,895	25,042	12,913	219	50.7	17,079	6,571	34	7	7	14.6
Pennsylvania System	1939	9,998	2,405,263	2,938,697	317,053	86,786	59.6	5,982,108	2,553,091	1,158	141	1,032	44.3
	1938	10,023	2,154,538	2,472,132	264,317	75,517	60.5	5,072,540	2,129,837	1,124	515	697	29.8
Reading	1939	1,443	351,699	389,581	46,655	9,937	59.4	743,499	357,413	191	6	166	45.7
	1938	1,445	333,837	366,591	41,870	8,885	57.9	666,909	311,676	191	34	120	34.8
Pocahontas Region:												
Chesapeake & Ohio	1939	3,057	718,908	755,950	33,844	30,255	56.0	2,541,183	1,367,654	357	57	123	22.9
	1938	3,050	670,439	702,309	30,255	26,881	55.6	2,230,273	1,181,038	329	74	141	25.9
Norfolk & Western	1939	2,169	556,591	582,823	33,704	22,935	58.5	1,870,870	976,276	259	60	41	11.4
	1938	2,178	500,059	519,311	26,508	19,053	58.8	1,494,854	770,563	259	78	28	7.7
Southern Region:												
Atlantic Coast Line	1939	5,082	652,021	654,730	8,932	13,964	58.8	824,845	261,125	256	12	104	28.0
	1938	5,079	557,831	567,481	8,193	13,467	61.2	741,311	251,479	249	14	84	24.2
Central of Georgia	1939	1,838	224,149	226,143	3,321	4,882	70.2	274,928	104,908	89	..	32	26.4
	1938	1,886	214,977	215,780	2,970	4,663	68.9	263,938	98,839	98	..	23	19.0
Illinois Central (incl. Y. & M. V.)	1939	6,537	1,224,061	1,230,479	23,809	32,141	60.2	2,160,482	897,474	573	16	215	26.7
	1938	6,541	1,205,489	1,213,418	23,251	31,004	59.8	2,064,538	835,924	640	32	190	22.0
Louisville & Nashville	1939	4,916	959,752	1,011,741	27,622	22,389	59.1	1,579,608	751,217	320	1	203	38.7
	1938	4,929	905,370	961,057	24,059	19,785	58.0	1,383,335	619,257	325	60	176	31.4
Seaboard Air Line	1939	4,305	527,918	545,776	3,597	13,441	61.2	815,948	284,499	228	9	68	22.3
	1938	4,305	477,858	498,820	4,763	12,917	62.5	772,009	266,325	217	23	63	20.8
Southern	1939	6,556	1,194,866	1,212,426	18,390	26,238	64.1	1,581,776	627,586	474	5	178	27.1
	1938	6,570	1,110,524	1,127,378	16,740	24,299	63.3	1,454,208	563,362	499	2	239	32.3
Northwestern Region:												
Chicago & North Western	1939	8,380	726,678	746,127	17,792	19,839	63.4	1,246,641	466,216	276	124	300	42.9
	1938	8,388	792,284	815,906	18,898	19,857	61.3	1,266,268	476,592	335	165	195	28.1
Chicago Great Western	1939	1,450	232,921	233,632	3,215	6,109	59.3	395,754	137,504	65	..	25	27.8
	1938	1,450	224,259	225,313	7,302	5,877	59.2	370,621	129,779	62	..	28	31.1
Chi., Milw., St. P. & Pac.	1939	10,934	1,098,360	1,130,875	40,057	28,224	61.3	1,829,857	734,866	418	108	158	23.1
	1938	10,953	1,060,546	1,097,024	39,301	26,888	61.6	1,732,960	696,541	418	126	145	21.0
Chi., St. P., Minneap. & Om.	1939	1,619	196,694	207,313	10,072	4,047	63.7	252,501	100,049	105	12	19	14.0
	1938	1,636	191,819	198,956	9,411	4,046	63.1	257,598	106,030	110	14	18	12.7
Great Northern	1939	7,976	650,973	644,905	21,757	18,673	63.1	1,218,436	476,621	306	62	170	31.6
	1938	7,975	629,168	619,573	21,046	16,946	63.2	1,076,281	419,179	312	89	138	25.6
Minneap., St. P. & S. St. M.	1939	4,266	319,999	325,701	3,565	6,630	64.9	389,530	150,671	109	1	27	19.7
	1938	4,277	331,602	337,718	3,203	6,669	63.3	400,309	152,869	122	2	34	21.5
Northern Pacific	1939	6,423	569,546	603,051	32,516	17,431	69.1	1,068,157	465,288	324	26	99	22.0
	1938	6,423	535,226	557,473	27,109	15,835	70.8	935,596	400,356	343	54	62	13.5
Central Western Region:												
Alton	1939	914	174,053	182,199	1,180	3,496	58.3	234,312	82,478	53	17	20	22.2
	1938	912	186,546	193,385	1,467	3,624	57.2	242,115	84,214	66	..	34	34.0
Atch., Top. & S. Fe (incl. G. C. & S. F. and P. & S. F.)	1939	13,475	1,426,642	1,505,541	61,556	36,651	61.9	2,297,568	758,107	523	99	286	31.5
	1938	13,512	1,459,532	1,559,924	63,168	38,072	62.3	2,406,361	810,236	554	111	266	28.6
Chicago, Burl. & Quincy	1939	8,899	1,022,145	1,052,723	31,097	28,478	61.7	1,827,042	726,910	424	57	89	15.6
	1938	8,928	1,006,748	1,028,122	33,092	27,416	61.2	1,647,071	670,237	410	66	89	15.8
Chi., Rock I. & Pac. (incl. Chi., Rock I. & Gulf)	1939	7,873	968,379	975,557	5,937	22,175	60.3	1,385,024	485,437	322	73	177	30.9
	1938	8,095	1,058,050	1,065,999	6,511	23,630	58.4	1,514,974	520,942	389	40	191	30.8
Denver & Rio Gr. Western	1939	2,563	213,435	238,962	27,728	5,342	61.5	355,940	148,663	130	39	24	12.4
	1938	2,570	216,182	239,971	26,938	5,217	62.1	341,445	143,241	132	25	34	17.8
Southern Pac.—Pac. Lines	1939	8,554	1,116,163	1,209,953	131,473	36,943	63.5	2,300,857	776,859	520	62	205	26.0
	1938	8,575	1,144,472	1,244,763	135,068	36,542	63.3	2,274,832	753,798	494	62	209	27.3
Union Pacific	1939	9,904	1,507,142	1,557,993	81,347	45,145	63.5	2,798,897	1,018,065	500	93	277	31.8
	1938	9,912	1,341,250	1,378,634	60,347	47,873	64.4	2,530,430	910,718	508	160	220	24.8
Southwestern Region:												
Mo.-Kansas-Texas Lines	1939	3,282	324,334	327,216	5,122	8,088	60.4	497,415	172,373	89	1	111	55.2
	1938	3,282	330,975	334,476	5,326	8,274	58.6	531,094	185,563	111	3	94	45.2
Missouri Pacific	1939	7,146	983,494	1,011,948	20,262	28,026	61.5	1,815,069	670,531	392	48	90	17.0
	1938	7,147	997,296	1,022,881	23,064	27,825	60.2	1,822,775	683,507	365	80	99	18.2
St. Louis-San Francisco	1939	4,804	619,799	625,547	8,008	12,508	61.2	793,924	306,413	256	78	42	11.2
	1938	4,847	636,714	641,001	8,459	12,544	59.0	817,825	314,992	244	66	77	19.9
St Louis Southw. Lines	1939	1,685	242,421	243,873	3,107	6,917	62.0	409,798	138,767	73	28	22	17.9
	1938	1,690	266,638	269,664	3,655	7,113	58.8	440,143	145,511	84	22	20	15.9
Texas & New Orleans	1939	4,415	507,669	507,719	2,575	12,252	64.5	762,279	272,880	207	26	44	15.9
	1938	4,419	517,832	517,939	3,541	12,873	63.6	809,637	293,455	225	32	32	11.1
Texas & Pacific	1939	1,932	259,511	259,511	1,398	7,285	56.6	487,573	155,829	76	12	100	53.2
	1938	1,932	277,503	277,503	1,462	7,624	56.2	511,006	157,402	81	17	87	47.0

Compiled by the Bureau of Statistics, Interstate Commerce Commission. Subject to revision.

1939, Compared with February, 1938, for Roads with Annual Operating Revenues Above $25,000,000

Region, road, and year	Number of freight cars on line: Home	Foreign	Total	Per cent unserviceable	Gross ton-miles per train-hour, excluding locomotives and tenders	Gross ton-miles per train-mile, excluding locomotives and tenders	Net ton-miles per train-mile	Net ton-miles per loaded car-mile	Net ton-miles per car-day	Car-miles per car-day	Net ton-miles per mile of road per day	Pounds of coal per 1,000 gross ton-miles, including locomotives and tenders	Locomotive-miles per locomotive-day
New England Region:													
Boston & Albany 1939	1,006	4,165	5,171	2.7	18,700	1,184	407	19.8	331	26.1	4,731	174	58.8
1938	1,426	3,953	5,379	2.3	20,634	1,230	418	19.0	262	21.0	4,114	167	48.5
Boston & Maine 1939	6,875	7,945	14,820	9.4	26,112	1,917	714	21.6	422	29.2	3,332	110	51.8
1938	8,450	6,906	15,356	13.4	26,131	1,848	670	20.7	366	26.2	2,879	105	43.3
N. Y., New Hav. & Hartf..1939	7,893	10,944	18,837	10.1	28,342	1,922	693	20.1	381	29.2	3,964	110	58.4
1938	9,665	9,011	18,676	16.0	26,869	1,804	638	19.8	338	26.8	3,218	112	54.6
Great Lakes Region:													
Delaware & Hudson 1939	7,633	3,394	11,027	5.0	31,555	2,174	1,044	31.0	671	34.3	8,938	123	46.4
1938	8,638	2,573	11,211	3.6	30,267	2,051	932	28.9	553	31.0	7,196	113	38.0
Del., Lack. & Western....1939	12,753	6,458	19,211	17.5	35,626	2,015	794	23.3	460	29.6	9,054	146	71.9
1938	13,996	4,147	18,143	15.9	32,895	1,902	732	22.7	413	27.5	7,665	149	65.8
Erie (incl. Chi. & Erie)....1939	18,049	11,584	29,633	4.5	42,982	2,615	1,029	24.1	697	44.3	8,972	107	54.0
1938	20,180	11,290	31,470	9.1	41,671	2,521	946	22.7	552	37.8	7,753	107	49.4
Grand Trunk Western....1939	4,880	6,035	10,915	15.5	31,810	1,628	581	22.3	417	30.6	4,635	107	81.4
1938	5,623	4,620	10,243	16.5	31,757	1,600	562	21.9	387	29.1	3,917	106	66.4
Lehigh Valley 1939	10,930	8,544	19,474	8.0	44,123	2,401	990	26.1	506	30.4	8,053	123	61.0
1938	11,844	7,847	19,691	10.1	43,498	2,364	962	25.5	452	27.7	7,127	122	49.4
New York Central....1939	92,408	58,667	151,075	16.9	36,417	2,199	894	27.9	516	31.8	7,211	112	75.4
1938	100,069	51,695	151,764	16.4	36,285	2,135	849	27.2	424	27.0	6,208	112	66.0
N. Y., Chicago & St. Louis.1939	7,192	7,297	14,489	4.2	39,387	2,120	793	23.0	884	61.3	7,678	97	90.3
1938	8,492	6,178	14,670	4.1	39,752	2,101	753	22.1	764	56.6	6,821	94	84.4
Pere Marquette 1939	10,129	6,155	16,284	3.9	29,609	1,743	649	24.6	429	29.6	3,364	104	77.5
1938	11,007	5,692	16,699	4.7	28,117	1,700	615	23.6	369	26.6	2,946	101	69.3
Pittsburgh & Lake Erie....1939	9,324	7,233	16,557	37.9	46,587	3,487	1,856	44.9	214	8.2	15,585	102	31.7
1938	7,497	8,621	16,118	35.3	42,860	3,241	1,693	44.2	153	6.2	11,091	100	24.2
Wabash 1939	13,703	9,125	22,828	10.6	38,468	1,854	654	21.2	507	37.4	4,846	131	71.4
1938	13,855	7,385	21,240	6.2	37,324	1,796	618	20.8	494	37.9	4,401	123	66.5
Central Eastern Region:													
Baltimore & Ohio....1939	59,657	19,915	79,572	20.5	28,758	2,117	933	30.8	503	27.1	6,341	152	51.6
1938	65,909	17,054	82,963	15.8	27,066	1,992	852	29.4	408	23.2	5,369	155	45.9
Central of New Jersey....1939	9,912	11,067	20,979	29.4	28,843	2,355	1,127	34.4	245	12.0	7,604	136	55.1
1938	10,771	8,659	19,430	31.4	28,158	2,276	1,069	34.1	238	12.1	6,942	146	51.8
Chicago & Eastern Illinois..1939	3,179	3,095	6,274	3.3	28,743	1,614	675	26.7	624	36.3	4,200	137	66.8
1938	3,311	2,730	6,041	2.6	30,484	1,658	702	27.0	631	36.4	4,000	133	53.5
Elgin, Joliet & Eastern....1939	8,582	3,267	11,849	7.0	17,005	1,921	919	38.2	246	11.2	7,661	128	61.1
1938	8,710	2,431	11,141	7.6	15,897	1,711	787	35.8	189	9.3	4,884	136	48.4
Long Island 1939	285	3,122	3,407	4.8	5,541	741	293	31.3	74	4.6	694	349	46.4
1938	375	2,737	3,112	3.9	5,393	698	269	30.0	74	4.9	602	334	39.5
Pennsylvania System 1939	199,537	46,369	245,906	21.3	38,015	2,525	1,078	29.4	369	21.0	9,120	121	55.5
1938	205,734	43,719	249,453	16.5	35,816	2,389	1,003	28.2	304	17.8	7,589	128	47.1
Reading 1939	25,669	10,598	36,267	24.3	27,309	2,124	1,021	36.0	350	16.4	8,846	141	47.6
1938	26,942	8,683	35,625	14.5	26,013	2,001	935	35.1	312	15.3	7,703	143	46.7
Pocahontas Region:													
Chesapeake & Ohio 1939	46,382	9,006	55,388	3.0	52,030	3,562	1,917	45.2	888	35.1	15,978	83	57.6
1938	50,016	6,885	56,901	2.3	50,066	3,352	1,775	43.9	752	30.8	13,829	88	53.0
Norfolk & Western 1939	38,816	4,516	43,332	7.3	52,452	3,399	1,774	42.6	804	32.3	16,075	103	66.5
1938	43,175	4,039	47,214	1.2	46,795	3,025	1,559	40.4	588	24.7	12,635	109	58.5
Southern Region:													
Atlantic Coast Line....1939	15,648	8,508	24,156	26.0	23,381	1,267	401	18.7	375	34.1	1,835	111	68.3
1938	18,534	7,447	25,981	18.3	22,952	1,331	451	18.7	343	30.0	1,768	113	63.1
Central of Georgia....1939	5,160	2,549	7,709	2.1	23,928	1,230	469	21.5	484	32.1	2,038	124	73.3
1938	5,483	2,687	8,170	1.7	23,148	1,234	462	21.2	451	30.9	1,872	123	70.6
Illinois Central (incl. Y. & M. V.) 1939	29,209	13,719	42,928	5.1	28,647	1,777	738	27.9	739	44.0	4,903	149	58.2
1938	35,624	14,364	49,988	14.4	28,369	1,720	697	27.0	596	36.9	4,564	141	55.1
Louisville & Nashville....1939	40,936	8,012	48,948	19.0	25,570	1,648	784	33.6	546	27.5	5,458	131	74.7
1938	42,988	7,967	50,955	11.8	23,988	1,530	685	31.3	445	24.5	4,487	138	65.9
Seaboard Air Line....1939	11,929	5,238	17,167	4.2	26,814	1,566	546	21.2	584	45.1	2,360	120	71.3
1938	12,188	5,140	17,328	2.0	27,063	1,638	565	20.6	541	42.0	2,209	117	65.3
Southern 1939	22,751	17,525	40,276	10.2	23,039	1,332	528	23.9	556	36.3	3,419	147	68.2
1938	20,929	16,716	37,645	10.0	22,906	1,317	510	23.2	530	36.1	3,062	149	58.1
Northwestern Region:													
Chicago & North Western..1939	38,069	17,738	55,807	10.3	27,548	1,774	663	23.5	302	20.2	1,987	138	42.6
1938	40,541	15,603	56,144	8.5	25,529	1,657	624	24.0	298	20.2	2,029	129	47.3
Chicago Great Western....1939	2,345	2,860	5,205	2.2	30,729	1,703	592	22.5	933	70.0	3,387	147	98.4
1938	2,814	2,809	5,623	3.3	29,662	1,656	580	22.1	834	63.8	3,197	144	96.5
Chi., Milw., St. P. & Pac..1939	46,263	16,472	62,735	2.7	27,098	1,674	672	26.0	422	26.4	2,400	137	66.6
1938	47,944	14,540	62,484	2.9	27,021	1,642	660	25.9	396	24.8	2,271	134	65.2
Chi., St. P., Minneap. & Om.1939	3,604	5,187	8,791	9.7	17,280	1,294	513	24.7	397	25.2	2,207	139	60.4
1938	4,420	4,157	8,577	9.3	18,141	1,352	557	26.2	420	25.4	2,315	130	56.6
Great Northern 1939	38,256	8,671	46,927	10.6	27,932	1,887	738	25.5	366	22.7	2,134	143	48.2
1938	39,178	8,697	47,875	7.2	26,041	1,716	668	24.7	314	20.1	1,877	145	46.7
Minneap., St. P. & S. St. M.1939	13,054	3,422	16,476	6.1	19,811	1,222	473	22.7	329	22.3	1,261	127	84.2
1938	13,242	3,106	16,348	6.7	19,540	1,211	463	22.9	334	23.0	1,277	120	82.5
Northern Pacific 1939	31,617	5,335	36,952	10.1	29,151	1,883	820	26.7	453	24.6	2,587	157	54.9
1938	32,248	3,958	36,206	8.8	27,950	1,754	751	25.3	394	22.0	2,226	155	49.6
Central Western Region:													
Alton 1939	1,866	5,031	6,897	12.8	32,570	1,359	478	23.6	423	30.8	3,223	142	76.3
1938	2,686	5,818	8,504	13.6	31,237	1,304	454	23.2	347	26.1	3,298	139	73.6
Atch., Top. & S. Fe (incl. G. C. & S. F. and P. & S. F.).1939	78,345	10,459	88,804	10.8	31,980	1,613	532	20.7	304	23.8	2,009	136	65.4
1938	76,813	10,967	87,780	8.4	31,881	1,651	556	21.3	330	24.9	2,142	127	66.2
Chicago, Burl. & Quincy...1939	30,514	13,583	44,097	8.3	31,797	1,794	714	25.5	594	37.7	2,917	130	72.0
1938	30,270	12,727	42,997	7.0	29,468	1,641	668	24.4	556	37.2	2,681	131	71.0
Chi., Rock I. & Pac. (incl. Chi., Rock I. & Gulf)...1939	20,654	10,198	30,852	5.5	27,088	1,433	502	21.9	560	42.5	2,202	140	64.5
1938	23,417	10,992	34,409	7.3	26,836	1,435	494	22.0	529	41.1	2,298	140	65.2
Denver & Rio Gr. Western.1939	12,461	2,486	14,947	3.5	25,793	1,676	700	27.8	356	20.8	2,072	178	53.4
1938	12,849	2,707	15,556	3.0	25,025	1,587	666	27.5	329	19.3	1,991	169	54.2
Southern Pac.—Pac. Lines..1939	32,993	22,250	55,243	6.4	35,765	2,070	699	21.0	497	37.2	3,244	107	64.8
1938	35,251	26,002	61,253	6.0	33,032	2,003	664	20.6	436	33.4	3,140	110	68.3
Union Pacific 1939	40,644	17,893	58,537	14.3	39,908	1,867	679	22.6	625	43.7	3,671	135	70.1
1938	42,333	15,050	57,383	14.0	40,311	1,896	682	21.7	567	40.5	3,281	128	60.5
Southwestern Region:													
Mo.-Kansas-Texas Lines ...1939	6,011	2,734	8,745	2.8	30,571	1,534	532	21.3	702	54.5	1,876	102	62.8
1938	6,010	2,989	8,999	3.1	30,331	1,607	562	22.4	736	56.0	2,019	95	62.9
Missouri Pacific 1939	16,488	17,382	33,870	2.9	33,438	1,857	686	23.9	705	47.9	3,351	125	75.8
1938	18,800	17,645	36,445	2.5	32,779	1,836	688	24.6	652	44.1	3,416	125	74.3
St. Louis-San Francisco ...1939	18,816	4,305	23,121	6.5	25,758	1,284	496	24.5	476	31.8	2,278	140	63.9
1938	19,764	3,956	23,720	6.0	25,376	1,291	497	25.1	477	32.2	2,321	140	64.0
St Louis Southw. Lines....1939	2,724	2,600	5,324	2.8	33,831	1,693	573	20.1	920	74.0	2,941	97	75.5
1938	2,839	3,447	6,286	2.6	30,702	1,654	547	20.5	838	69.7	3,075	99	82.4
Texas & New Orleans.....1939	7,285	10,748	18,033	3.5	28,632	1,514	542	22.3	539	37.5	2,207	94	69.7
1938	7,602	10,692	18,294	3.9	29,143	1,574	571	22.8	572	39.5	2,372	91	69.4
Texas & Pacific 1939	3,929	3,721	7,650	1.6	36,424	1,879	601	21.4	702	58.0	2,881	91	53.4
1938	4,047	4,573	8,620	1.9	34,031	1,843	568	20.6	667	57.5	2910	89	58.1

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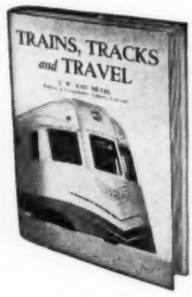

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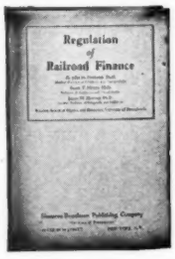

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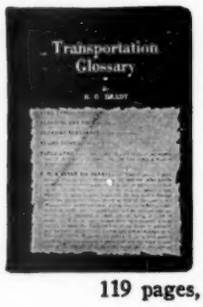

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